

THE UNIVERSITY OF CHICAGO

# ANNOUNCEMENTS



THE SCHOOL OF MEDICINE



FOR SESSIONS OF 1943 · 1944

OCTOBER 15, 1943 .

# CALENDAR FOR THE YEAR 1943-44

## 1943

June 12	Saturday	Alumni Day
June 13	Sunday	Convocation Sunday
June 18	Friday	Spring Convocation; Spring Quarter ends

## SUMMER QUARTER

June 21	Monday	Registration for the Summer Quarter
June 22	Tuesday	<i>Summer Quarter begins; classes meet*</i>
July 9	Friday	} Registration for second half of the First Term
July 10	Saturday	
July 29	Thursday	} Registration for the Second Term of the Summer Quarter
July 30	Friday	
July 31	Saturday	} First Term of the Summer Quarter ends
July 30	Friday	
Aug. 2	Monday	Second Term of the Summer Quarter begins
Aug. 20	Friday	} Registration for second half of the Second Term
Aug. 21	Saturday	
Sept. 5	Sunday	Convocation Sunday
Sept. 10	Friday	Summer Convocation
Sept. 11	Saturday	Summer Quarter ends

## AUTUMN QUARTER

Sept. 22-27		Freshman Week
Sept. 25	Saturday	} Registration for the Autumn Quarter
Sept. 27	Monday	
Sept. 28	Tuesday	<i>Autumn Quarter begins; classes meet*</i>
Nov. 25	Thursday	Thanksgiving Day: a holiday
Dec. 12	Sunday	Convocation Sunday
Dec. 17	Friday	Autumn Convocation
Dec. 18	Saturday	Autumn Quarter ends

## 1944

## WINTER QUARTER

Jan. 3	Monday	<i>Winter Quarter begins; registration; classes meet*</i>
Jan. 31	Monday	Orientation Day for College students entering at Midyear
Feb. 1	Tuesday	Registration for College students entering at Midyear
Feb. 2	Wednesday	Classes meet for College students entering at Midyear
Mar. 19	Sunday	Convocation Sunday
Mar. 24	Friday	Winter Convocation Winter Quarter ends

## SPRING QUARTER

Mar. 27	Monday	<i>Spring Quarter begins; registration; classes meet*</i>
June 10	Saturday	Alumni Day
June 11	Sunday	Convocation Sunday
June 16	Friday	Spring Convocation; Spring Quarter ends

\* Classes scheduled to meet on the opening day of the Quarter will meet on that day; others will meet according to their regular schedules.

THE UNIVERSITY OF CHICAGO  
ANNOUNCEMENTS

THE SCHOOL OF MEDICINE

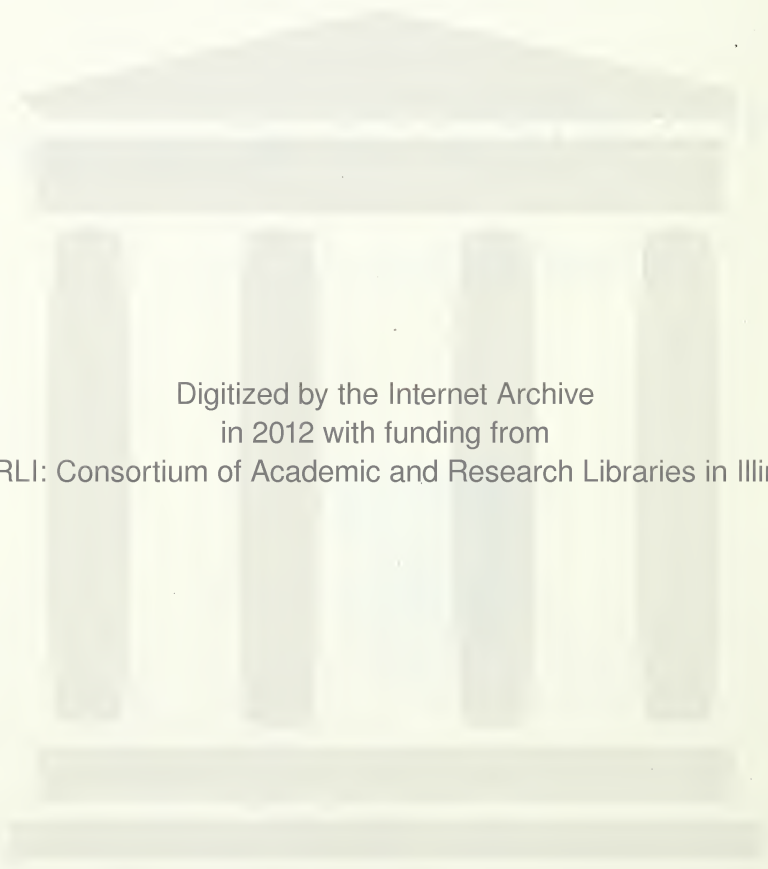
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## OFFICERS OF ADMINISTRATION

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EMERY T. FILBEX, Vice-President of the University, Harper Memorial Library, Room W11.

WILLIAM BENTON, Vice-President of the University, Harper Memorial Library, Room M10.

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FREDERIC WOODWARD, Vice-President Emeritus of the University, 122 South Michigan Avenue.

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RALPH A. BEALS, Director of the University Libraries, Harper Memorial Library, Room E21.

AARON JOHN BRUMBAUGH, Dean of Students, Cobb Lecture Hall, Room 203.

ERNEST CADMAN COLWELL, Dean of the Faculties, Swift Hall, Room 101.

ALBERT F. COTTON, Bursar, Press Building, Room 100.

REUBEN FRODIN, Administrative Assistant to the President, Goodspeed Hall, Room 201.

CHARLES WHITNEY GILKEY, Dean of the Chapel and Associate Dean of the Divinity School, Chapel Office, Rockefeller Memorial Chapel.

JOHN P. HOWE, Executive Secretary, Radio Office, Harper Memorial Library, Room M10.

NEIL HERMAN JACOBY, Secretary of the University, 122 South Michigan Avenue.

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ERNEST C. MILLER, Registrar, Cobb Lecture Hall, Room 104.

WILBUR C. MUNNECKE, Adviser on War Projects, Harper Memorial Library, Room M14.

WILLIAM E. SCOTT, Assistant Dean of Students, Cobb Lecture Hall, Room 105.

OTTO STRUVE, Director of the Yerkes Observatory, Williams Bay, Wisconsin.

RALPH WINFRED TYLER, University Examiner, Oriental Institute, Room 307.

VALERIE C. WICKHEM, Director of Admissions, Cobb Lecture Hall, Room 105.

JOHN ALBERT WILSON, Director of the Oriental Institute, Oriental Institute, Room 235.

ROBERT CARLTON WOELLNER, Executive Secretary, Board of Vocational Guidance and Placement, Cobb Lecture Hall, Room 215.

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WILLIAM HAY TALIAFERRO, Dean of the Division of the Biological Sciences (on leave of absence).

ROLAND WENDELL HARRISON, Acting Dean of the Division of the Biological Sciences, Albert Merritt Billings Hospital, Room S144.

ARTHUR CHARLES BACHMEYER, Associate Dean of the Division of the Biological Sciences and Director of the University Clinics, Albert Merritt Billings Hospital, Room S144.

THOMAS PARK, Associate Dean of the Division of the Biological Sciences, Albert Merritt Billings Hospital, Room S144.

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VICTOR JOHNSON, Dean of Students in the Division of the Biological Sciences (on leave of absence).

BASIL COLEMAN HYATT HARVEY, Acting Dean of Students in the Division of the Biological Sciences (including the School of Medicine), Cobb Lecture Hall, Room 216.

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GEORGE OTIS WHITCOTTON, Superintendent of the University Clinics.

STANLEY A. FERGUSON, Assistant to the Director of the University Clinics at the Chicago Lying-in Hospital (on leave for military service).

J. MILO ANDERSON, Assistant Superintendent of the University Clinics.



## THE UNIVERSITY OF CHICAGO

### HISTORICAL SKETCH

The present University of Chicago was preceded by an earlier institution, now known as the Old University, which was incorporated in 1857 and was located on a site donated by Senator Stephen A. Douglas on Cottage Grove Avenue between Thirty-third and Thirty-fifth streets. Small in size and collegiate in character, it fulfilled its function until 1886, when it was forced by financial difficulties to close its doors. It had granted a total of 312 degrees, and its alumni were subsequently "adopted" by the new University.

In 1889 the American Baptist Education Society resolved to aid in the establishment of a new collegiate institution in Chicago, and John D. Rockefeller subscribed \$600,000 on condition that \$400,000 additional should be pledged within a year. Under the leadership of Thomas W. Goodspeed and Frederick T. Gates, Secretary of the Education Society, the necessary pledges were obtained. Marshall Field presented a tract of land as a site, and on September 10, 1890, The University of Chicago was incorporated. The first Board of Trustees consisted of twenty-one members, with E. Nelson Blake as President of the Board. Mr. Blake was soon succeeded by Martin A. Ryerson, who served with distinction until 1922, when Harold H. Swift, an alumnus of the University, was chosen to the presidency (now chairmanship) of the Board.

At the first meeting of the Board of Trustees after incorporation William Rainey Harper was appointed President of the University. He was then thirty-four years of age. He had been graduated from Muskingum College at fourteen and had received his Ph.D. from Yale at eighteen. He had taught at the Baptist Theological Seminary at Morgan Park, and at the time of his appointment to the presidency he was Professor of Hebrew in Yale University.

Dr. Harper insisted that the new institution should be envisaged as a real university, with a faculty and facilities adequate not only for undergraduate teaching but for the pursuit of advanced studies and research. Mr. Rockefeller, convinced of the soundness of this view, added \$1,000,000 to his initial gift, and in December, 1890, a broad outline of Dr. Harper's plans was presented to the Board of Trustees and adopted.

The first President assumed his duties at the University on July 1, 1891, which, because of the significance of that event, has been celebrated as the date of the founding of the University. A year was devoted to the selection of the faculty, the development of educational and architectural plans, and the completion of the first building—Cobb Lecture Hall. Attracted by Dr. Harper's conception of a university and by salaries that were then considered astonishing, a remarkable faculty was assembled. It included eight former presidents of universities or colleges and a number of the leading scholars and scientists of the country. When, on October 1, 1892, the doors of Cobb Lecture Hall were opened to students, the faculty numbered 120 and the students 594.

Fortunately, the University had from the beginning a well-conceived architectural plan. The first buildings were constructed of Indiana limestone in a late Gothic style, and although the Quadrangles now represent the work of various architects, the harmony of material and style has been faithfully preserved. Within the first five years thirteen buildings were erected. During the next ten years eighteen were added. Today, on the campus of 105 acres extending along both sides of the Midway, there are eighty-five buildings.

From the day of its foundation the University was in many important respects a pioneering institution. It was the first major university which from the beginning accepted women as students on an equal basis with men. In 1892 it established a university press for the publication of the work of scholars and scientists. By the organization of the curriculum on a quarter instead of a semester basis the first opportunity was afforded to pursue regular



university studies during the summer months. Through an extension division the first home-study program on a university plane was established. By dividing the undergraduate curriculum into a junior and a senior college the University pioneered in a movement which has resulted in the establishment of nearly six hundred junior colleges in the United States. More important, perhaps, than any of these innovations was the recognition and performance from the outset of a university's function in the fields of graduate study and scientific research.

President Harper, after a service of fifteen years, died in 1906. He was succeeded by Harry Pratt Judson, who had been closely associated with him as Dean of the Faculties. In 1923 Dr. Judson retired and was succeeded by Ernest DeWitt Burton, Head of the Department of New Testament and Early Christian Literature. After only two years of service President Burton died, and Max Mason, Professor of Mathematical Physics in the University of Wisconsin, was appointed the fourth president of the University. In 1928 he resigned to accept a position with the Rockefeller Foundation, of which he soon thereafter became the president.

Each of these presidents contributed his talents effectively to the strengthening of the University. There were periods of rapid growth and periods of adjustment and consolidation. In each administration, in one direction or another, there was marked development.

Robert Maynard Hutchins, Dean of the School of Law of Yale University, became the fifth president of the University on July 1, 1929. On his recommendation the various departments in arts, literature, and science were grouped in four Divisions—the Humanities, the Physical Sciences, the Biological Sciences, and the Social Sciences. The curriculum of the College (originally of the Junior College) was so reorganized by the faculty as to provide a general education for all students and prepare them for admission to a Division or a Professional School. The Bachelor's degree, denoting the completion of general education, is conferred by the College Division. All advanced degrees are conferred by the upper Divisions or by the Professional Schools. Throughout the University the progress of the student is determined chiefly by comprehensive examinations rather than by the accumulation of course credits.

In addition to the College and the four Divisions, the University includes University College (downtown), the Home-Study Department, and six professional schools—the Divinity School, the Law School, the School of Business, the School of Social Service Administration, the Graduate Library School, and the School of Medicine. The former School of Education has been incorporated in the Division of the Social Sciences.

The Divinity School is a continuation of the Baptist Theological Union Seminary, which was founded in 1866 and merged with the University in 1891. The School of Business was established in 1898, and the Law School in 1902. The School of Social Service Administration originated in the Chicago School of Civics and Philanthropy, which was taken over by the University in 1920. The School of Medicine was established in 1924, and the Graduate Library School in 1926.

The University's Oriental Institute, devoted to archeological research chiefly in the Near East, was founded in 1919. The Yerkes Astronomical Observatory was established in Williams Bay, Wisconsin, in 1897, and by a co-operative arrangement with the University of Texas the Yerkes staff now operates also the new McDonald Observatory in Texas.

The Articles of Incorporation of the University originally provided that two-thirds of the members of the Board of Trustees, and also the President of the University, should be members of Baptist churches. It was not contemplated, however, that the institution should be sectarian in character. As the University developed, the number of Trustees was increased and the restriction as to denominational membership was modified. The Articles of Incorporation no longer require that the President shall be a Baptist and now provide that, of a Board of thirty-five members, three-fifths shall be members of Christian churches, and of the three-fifths a majority shall be Baptists.

As of June 30, 1942, contributions to the University since its foundation aggregated \$148,097,759. Of this sum the Founder contributed \$34,708,375. Endowment funds amounted to \$71,350,268, and the physical plant was valued at \$43,621,701. In October, 1942, the Faculty numbered 859, and the registration of students on the Quadrangles was 4,946, of which number 2,746 were undergraduates, 1,186 were graduate students in the Divisions, 895 were students in the Professional Schools, and 119 were students-at-large. The University had granted 50,030 degrees to 42,925 persons as of June 30, 1942.\*

\* For detailed information, especially of the earlier years of the University, the reader is referred to Thomas W. Goodspeed's *A History of the University of Chicago*, published by the University of Chicago Press in 1916, and to the same author's *The Story of the University of Chicago*, published by the Press in 1925.

## THE SCHOOL OF MEDICINE

### GENERAL INFORMATION

#### INTRODUCTION

The School of Medicine was established in the Division of the Biological Sciences in 1924, when clinical facilities were provided in close contact with the preclinical departments which were already on the University Quadrangles. Each of the clinical and preclinical departments is organized as an individual University department on the same basis as all the other departments of the University, that is, for the preservation and advancement of knowledge in its particular field and for the teaching of students. Each preclinical department includes in its work, in addition to the courses leading to the degree of Doctor of Medicine, courses leading to the degree of Bachelor of Science,\* Master of Science, and Doctor of Philosophy. The clinical departments also offer courses leading to the Departmental degree of Master of Science and the degree of Doctor of Philosophy.

Clinical training is provided in the facilities of the University Clinics, including The Max Epstein Clinic, The Albert Merritt Billings Hospital, The Chicago Lying-in Hospital, The Bobs Roberts Memorial Hospital for Children, The Country Home for Convalescent Children, and, by affiliation, The Home for Destitute Crippled Children.

Six University departments are devoted to the fundamental preclinical medical sciences, and four are devoted to clinical medical sciences. The Department of Pathology works in both clinical and preclinical fields. All these co-operate in the work of the medical courses. Through these courses the University seeks to develop graduates capable of sound scientific research or practice who will grow as the sciences grow and so take to their patients all that science can offer in their aid.

Active research is carried on in all departments on current medical problems and in the fundamental sciences. Capable students are encouraged to share in this work and to undertake independent investigations. At least a minimum training in research is regarded as an important element in medical education.

The medical course extends through twelve quarters and leads to the degree of Doctor of Medicine. A year devoted to a hospital internship is required in Illinois for license to practice Medicine.

#### GENERAL REGULATIONS

1. *Changes in rules and regulations.*—The right is reserved by the University to make changes at any time in requirements for admission, curriculum, fees, or any rules and regulations, and to refuse further registration to a student whom his instructors believe to be incompetent in scholarship or otherwise unfit to continue his course.

2. *Physical and medical examination.*—Every medical student must report at the office of the University Health Service in the Clinics for physical and medical examination during the first two weeks of his residence in the Medical School. Each student must show evidence of satisfactory vaccination against smallpox. The University seeks to maintain the best possible sanitary and hygienic conditions in the matter of (a) purity of water and food supply, (b) sanitary conditions of all buildings and rooms used in any way by students, (c) prevention of contagious diseases, and (d) restraining students from un-

\* The Divisional degree of Bachelor of Science will be awarded in the Division of Biological Sciences during the present war emergency. See *Announcements of the College and the Divisions* (pp. 45-51) for information concerning the Bachelor's degree awarded by the College.

dertaking work for which they are physically unfit. The co-operation of all students is requested in carrying out this purpose.

Failure to report for a medical examination within the first two weeks of the quarter or to keep an appointment already made necessitates the payment of a late fee of \$2.00, to be paid to the Hospital Cashier, the University Clinics, and the receipt brought to the Health Service.

The privileges of the University Health Service include all ambulatory medical treatment which can be given by the Health Service staff, emergency treatment at the hospitals when the Health Service is not open, ordinary laboratory tests, hospitalization for two weeks for any single illness, professional services during hospitalization, operating-room fees for emergency operations, and, when recommended by the Health Service staff, chest X-rays, allergy treatments, and one to three visits to another clinic for a single condition. The privileges do not include elective operations, private rooms, special nurses, medicines, and special expensive dressings, appliances, or treatments provided through the University Clinics.

House calls on students in the University district are made by physicians of the regular Health Service staff for a nominal charge.

3. *The University year.*—The University year is divided into four quarters of about twelve weeks each. The Autumn, Winter, and Spring quarters begin about the first of October, January, and April, respectively, and the Summer Quarter immediately after the close of the Spring Quarter. The Summer Quarter is divided into two equal terms.

4. *Attendance of undergraduates.*—It is expected that students will regard an engagement with an instructor or other University appointment as they regard any other engagement and that the customary rules of courtesy will be observed.

## THE WARTIME PROGRAM

The needs of the armed forces for medical officers may result in a serious shortage of physicians for military and civilian practice, since seven physicians per 1,000 men are required in the Army, while about one per 1,000 suffices in civilian life. To help meet this need, the University of Chicago, along with almost all the medical schools of the country, has adopted the accelerated program of medical education. Under this plan, the twelve quarters of required work will be completed in three (instead of four) calendar years by requiring attendance during the Summer Quarter each year. In this program there will be no reduction in standards or content.

Since the main objective, even in training men for military medical service, is to train good physicians, the curriculum has been changed very little. There is somewhat more emphasis in courses already existing, upon problems related to war medicine. In addition there are opportunities for studying first aid, aviation medicine, and war medicine, in short courses or seminars.

The School of Medicine has contracted with both the Army and the Navy to train medical students. Most able-bodied male students are in uniform—"soldiers (or sailors) assigned to medical school." Students accepted for admission should communicate with the Dean of Students about the Army Specialized Training Program, and the Navy V-12 program. There are also places in all entering classes for women and men disqualified for military service for minor physical defects.

## ADMISSION

Classes are limited to 65 students in the first six quarters and to 60 students in the six clinical quarters.

Under the wartime accelerated program, students will begin medical work only in the Winter Quarter (January 3) in 1944, and the Autumn Quarter (about October 1) in 1944. Application should be made approximately nine months before the date the appli-



cant desires admission. The Committee on Admissions selects students on the basis of excellence of scholarship, aptitude, character, and personality—qualities judged necessary or desirable in the study and practice of medicine.

## I. REQUIREMENTS FOR ADMISSION TO THE SCHOOL OF MEDICINE

During the war, the prescribed premedical work of the Army Specialized Training Program or the Navy V-12 Program will fulfil the requirements for admission, even in the case of male civilians or of women who may pursue such programs. Selection of Army and Navy premedical students for the study of medicine will be conducted jointly by representatives of the Army or Navy and the School.

For students not following the regular Army or Navy premedical program:

A. Eight quarters (80 semester hours) of University work are required. This can be completed in two calendar years by continuous attendance, including summers. The work must include: (1) A general introductory training in the social sciences and humanities, including English composition. (2) Inorganic chemistry through elementary quantitative analysis, and elementary organic chemistry. (3) Physics: mechanics, electricity, heat, light, and sound. (4) Vertebrate zoölogy and embryology. (Embryology may be taken during the first quarter of medical work, if necessary.)

B. It is recommended (but not required) that the following subjects be included, provided that time for them is available to the student: advanced organic chemistry, mathematics, psychology; and German, French, or Spanish (German preferred).

C. Selection by the Committee on Admissions based on aptitude, scholarship, and character. Evidence of interest and ability in research will commend applicants to the Committee. Applications should be on file nine to fifteen months before the time admission is desired.

D. Approval of physical condition by the Student Health Service.

## II. SUGGESTIONS REGARDING COLLEGE PREPARATION FOR MEDICINE

The study and practice of medicine is so wide a field that it offers opportunity for exercise of many different kinds of special training and ability. Understanding of the organization of society, of its machinery and history, and skill in communication with others are desirable. Extra training may well be sought in the use of the English language, physics, psychology, physical chemistry, advanced biology, physiology of plants, mathematics, history, economics, and sociology.

The Council on Education of the American Medical Association has suggested subjects to be included in college work preparatory for medicine. These have been adopted and are required by many state boards of medical licensure. The state boards require only two years (or sixty semester hours) of college work, and students completing three or four years of work in the university go far beyond these suggestions in some or all lines. Their requirements are:

A. The minimum of collegiate credit required for entrance to approved medical schools shall be not less than two full academic years, which shall include English, theoretical and practical courses in physics and biology, and general and organic chemistry, completed in institutions approved by accrediting agencies acceptable to the Council. Three years or more in college is recommended.

B. Admission to approved medical schools may also be by examination under the following conditions:

1. Candidates who have completed two years of collegiate instruction and present evi-

dence of general scholarship of high order, but who lack credits in not more than two of the required subjects, may be admitted on passing examinations in these subjects.

2. Candidates who have completed three years of collegiate instruction and present evidence of having accomplished work of distinction in one or more fields of learning, but who lack credit in any or all of the required subjects, may be admitted on passing examinations in these subjects.

A list of colleges of arts and sciences approved by the various national and regional standardizing agencies has been prepared by the Council for the guidance of medical schools in the selection of students. Exception may be made in that any school may admit applicants who have fulfilled the requirement in American or Canadian institutions not approved by such accrediting agencies, provided the applicant gives evidence of superior ability.

All collegiate instruction given in satisfaction of this requirement must be based on the same entrance requirements and must be of the same quality and standard of instruction as that required for a baccalaureate degree in the institution in which the candidate receives his preparation.

Licensing boards of the various states require evidence of the completion of certain preliminary education in advance of matriculation in a recognized medical school before candidates are admitted to examinations for license to practice. The requirements in any particular state may be ascertained in the office of the Dean of Students.

### III. ADMISSION AS STUDENT-AT-LARGE IN THE MEDICAL COURSES

Persons who are qualified for admission to the University, but who do not intend to become candidates for a degree, may with the permission of the appropriate Dean of Students be admitted to the University as students-at-large. Persons interested in this opportunity for study should write to the Entrance Counselor.

A student-at-large carries a full program of work unless permission for a reduced program is given by the Dean of Students. The work taken may not be used in fulfillment of the residence requirement. Credits earned, however, are recorded in the Registrar's office and are available for transfer purposes.

Registration of students-at-large in the medical courses is subject to the approval of the Dean of Students in the Division of the Biological Sciences. In the case of students coming from other medical schools, the University requires (1) a statement of good standing from the dean of the school previously attended, (2) a recommendation from that dean for registration in the courses desired here, and (3) an official transcript showing the satisfactory completion of courses prerequisite to those desired here.

### IV. ADMISSION WITH ADVANCED STANDING IN THE MEDICAL COURSES

Students from other medical schools receive credit for work successfully completed in them, provided the Committee on Admissions admits them and judges the work already completed equivalent to the work required in the University of Chicago. Such students must have fulfilled the requirements for admission to the School of Medicine of this University.

Students from other schools applying for admission to the clinical work of the third year must present official transcripts showing in a manner satisfactory to the Committee on Admissions the completion of the admission requirements and of medical work judged equivalent to that of the first two years in the medical course of this School including Pathology 301 and 302. In cases of doubt the applicant is required to pass any or all departmental examinations of this University. Under the accelerated program, very few, if any, students with advanced standing can be admitted.



## V. PROCEDURE FOR ADMISSION

A student seeking admission to the School of Medicine is requested to write to the Entrance Counselor, The University of Chicago, Cobb Lecture Hall, Room 105, for an application form, which is to be filled out fully and returned, together with an official itemized transcript of the student's college record, including a statement of his high-school record and a letter of honorable dismissal, to the Director of Admissions, Cobb Lecture Hall, Room 105. If admission is granted the applicant, both he and the appropriate dean will be notified; if it is denied, the applicant will be notified.

Students are not necessarily admitted even though their records meet the specific requirements. There have always been many more qualified applicants than available places.

## MATRICULATION AND REGISTRATION

A. *Time of registration.*—Students in residence register in advance for following quarters on the days announced on the bulletin boards and in the *Weekly Calendar*. Students registering in the University for the first time may register in advance or on the first day of the quarter.

B. *Order of procedure.*—Registration is initiated in the office of the Dean of Students, continued in the office of the Registrar, and concluded in the office of the Bursar. A student who has been admitted to the University presents himself first to the Dean of Students. From that point he is directed how to proceed.

C. *Changes in registration.*—After the second day of the quarter (first week for graduate students) change of registration is permitted only (1) with the consent of the Dean, and (2) on payment of a fee of \$1.00 for each instance of change. When changes are necessitated by the University, no fee is required.

All changes in registration must be made officially in the office of the Dean of Students. This applies to courses dropped, courses added, and changes from one course to another.

## CONTINUANCE

Continuance of students is subject to recommendations and conditions made by the Committee on Promotions and Degrees. In case of unsatisfactory work (below the grade of C) continuance and the award of degrees or certificates are subject to special requirements made by this Committee. Students may be refused further registration in the medical courses if in the judgment of the Committee they are incompetent in scholarship or otherwise unfit to continue the course. Students who have been out of residence for a year or more, for any reason, can be readmitted to classes only with the approval of the Committee on Admissions and the Committee on Promotions and Degrees.

## DEFICIENCIES IN MEDICAL COURSES

A. A student's work is *deficient* when either the quality or quantity of work done is not acceptable to the instructor. A qualitative deficiency is indicated by the grade reported. A quantitative deficiency is reported as "incomplete," with indication of the deficiency. The instructor may, at his option, reduce the grade or the amount of credit because of inadequate work throughout the quarter or excessive absence from whatever cause.

B. If a deficiency is not removed within the student's next quarter of residence, or if the student is not meanwhile in residence within eighteen months of the time the deficiency was incurred, the student must repeat the course to receive credit. A course lacking final examination may be completed, with the consent of the Dean and the instructor, by passing either (1) a special examination administered through the office of the Home-Study Department, or (2) the regular class examination at the end of the student's next quarter of residence, provided the course is again offered in that quarter. Any incomplete course must be completed to the satisfaction of the instructor.

## DEGREES

Work in the School of Medicine may lead to:\*

1. The degree of Doctor of Medicine.
2. The degree of Doctor of Medicine with Honors.
3. The degree of Master of Science.
4. The degree of Doctor of Philosophy.

Recommendation for any of these awards is conditional upon the maintenance of unexceptionable conduct while a student in the University.

1. *The degree of Doctor of Medicine.*—This degree is awarded after twelve quarters of satisfactory full-time work in a medical school approved by the University. The work of the last three quarters must have been done in the University of Chicago.

2. *The degree of Doctor of Medicine with Honors.*—This degree is awarded when the student, in addition to meeting with distinction (an average of at least B) the minimum requirements for the degree of Doctor of Medicine, has also done productive research work and prepared a thesis constituting an actual contribution to knowledge. Honors are awarded in one department, on the recommendation of that department approved by the Faculty.

3 and 4. *The degrees of Master of Science and Doctor of Philosophy.*—Statement of the conditions under which these degrees are awarded appears in the *Announcements of the College and the Divisions*.

*Post-doctorate medical work.*—Special advanced work may be undertaken by candidates holding the degree of Doctor of Medicine. (See p. 23.)

## FEES

Fees are payable to the Bursar on or before the first day of each quarter. Registration is not complete till the fees are paid. After the fifth day membership in the University is granted only with the special consent of the Dean and the payment of a fee of \$5.00 for late registration. The Army or Navy pays most of the fees for men in uniform.

1. *Registration fee.*—A registration fee of \$3.00 is required quarterly of each student who has not paid the matriculation fee, which was in effect prior to the adoption of the registration fee. Students who have paid only a part of the matriculation fee are required to pay the remainder of that fee according to previous arrangements, but are exempt from the payment of the registration fee.

2. *Health Service fee.*—Quarterly, \$3.00.

3. *Tuition fee.*—The tuition fee in the Medical School is \$150 a quarter. Medical students pay this fee during at least twelve quarters.

A candidate for the degree of Doctor of Medicine may have his tuition fee fixed at \$50 a quarter under the following conditions: (a) that he has paid in the aggregate full tuition for six quarters of clinical work at the University; and (b) that he continues to take additional work in partial fulfilment of the requirements for the degree of Doctor of Medicine.

This adjustment of tuition fees may be made by the Dean of Students in the Division of the Biological Sciences, Cobb Lecture Hall, Room 216.

Holders of fellowships and graduate service scholarships are not entitled to a reduction of fees under this rule.

4. *Fees for laboratory apparatus and supplies.*—Students in laboratory courses are required to purchase at the office of the Bursar adequate breakage and supply tickets, to be deposited as follows: for courses in chemistry, with the Curator of Kent Chemical Laboratory; for courses in anatomy, bacteriology and parasitology, biochemistry, botany, pathol-

\* *The degree of Bachelor of Science.*—Students who enter the Medical School after three years of university or college education may if they so desire qualify for this degree while in the Medical School in accordance with the requirements stated in the *Announcements of the College and the Divisions*.

ogy, pharmacology, physiology, and zoölogy, at the appropriate laboratory supply store-room. New tickets must be purchased at the opening of each quarter, and a refund of the unused balance on the old tickets can be obtained at that time. If microscopes are rented for courses requiring their use, a rental fee, varying with the type of the instrument, is charged. A student may procure a skeleton from the Osteological Store Room on payment of a deposit of \$50, or parts of a skeleton on payment of special deposits. The deposit will be refunded when the skeleton (or part) is returned uninjured. Credit for courses will not be reported until the return of all material drawn. The necessary textbooks may be purchased at the University of Chicago Bookstore in Ellis Hall.

5. *Graduation fee.*—The graduation fee is \$20, payable when any degree is awarded.

### LIVING ACCOMMODATIONS

All of the residence halls for men heretofore operated by the University are occupied by members of the armed forces. Of the four residence halls for women, Green Hall, located between Fifty-eighth and Fifty-ninth Streets on University Avenue, is designated as a residence for graduate students. Single rooms have been converted into double rooms by means of double-deck beds. The rooms are furnished except for towels, dresser covers, and curtains. Quarterly rentals, including meals, range from \$148.50 to \$157.50 a person. In an effort to provide satisfactory living quarters for students who cannot be accommodated in residence halls, the Office of the Bursar maintains a listing and an inspection service of rooms available in private homes in the neighborhood of the University. Since the renting of such accommodations by correspondence is unsatisfactory, the lists are not sent by mail. The University has a limited number of apartments for rental to married students working for higher degrees. In addition to the University apartments, there are a few furnished apartments and houses available for subleasing in the immediate vicinity of the University. All inquiries concerning housing should be addressed to the Bursar.

Residents of Beecher, Foster, Green, and Kelly halls (for women) have their meals in the dining-rooms of these halls. Hutchinson Commons, located on the Quadrangles, provides cafeteria service daily for all meals and is open to men and women. The cafeteria in the Billings Hospital is open to medical students.

Army and Navy medical students are on commutation of rations and quarters; that is, they are granted an allowance for meals and housing. They do not have a common mess and are not housed in barracks.

### ESTIMATE OF EXPENSES\*

The following table will enable the student to form an estimate of the quarterly expenses which are common to all students in the University.

Expense	Low	Average
Tuition.....	\$150.00	\$ 150.00
Registration and Health Service fees.....	6.00	6.00
Rent and care of room.....	45.00	63.00
Board.....	82.00	96.00
Laundry and cleaning.....	12.00	16.00
Textbooks, laboratory fees, and supplies.....	15.00	20.00
Incidentals.....	15.00	30.00
Total, one quarter.....	\$325.00	\$ 381.00
Total for three quarters.....	\$975.00	\$1,143.00

\* Estimates formulated as of March, 1943.



## FELLOWSHIPS, SCHOLARSHIPS, AND OTHER AIDS

### A. FELLOWSHIPS

Fellowships are awarded annually through the Committee on Fellowships and Scholarships to students studying for higher degrees to be conferred by the University of Chicago.

*Applications for fellowships.*—Applications and/or recommendations for fellowships should be in the hands of the Committee on Fellowships and Scholarships, Cobb Lecture Hall, Room 203, *on or before March 1*. Students participating in military programs are not eligible to apply for fellowships.

*Attainments required.*—The candidate must have attained proficiency in the department in which he wishes to pursue advanced study. In making appointments, special weight is given to dissertations indicating ability to conduct original investigation.

*Appointments.*—The annual appointments to regular fellowships are made April 1. Appointees are given until April 15 to accept or decline. Fellowships are available for any three of the four quarters, beginning with the summer quarter following the date of appointment, unless otherwise stated in the appointment.

*Conditions of acceptance.*—Acceptance of a fellowship is conditioned by agreement to devote full time to graduate study toward an advanced degree at the University of Chicago, unless special permission for other work has been secured in advance through written application to the Chairman of the Committee on Fellowships.

*Payment of tuition.*—All fellows are required to pay the full tuition fee at the beginning of each quarter during the tenure of their appointments. Holders of fellowships are not eligible to reduced fees.

*Quarterly reports.*—Each fellow is required to make a written report to the Committee on Fellowships and Scholarships at the beginning of each quarter, outlining his work as a student, and the work assigned to him by the University. This report, indorsed by the Chairman of the Department and the Dean of Students in the Division, must be filed before payment of the cash stipend is made. Report blanks may be procured at the office of the Committee on Fellowships and Scholarships.

There are three types of fellowships: (1) regular University fellowships; (2) endowed and annual fellowships; and (3) special research funds and foundations.

### I. UNIVERSITY FELLOWSHIPS

Regular University fellowships are provided in all departments of the University by appropriations from the general funds of the University. There are eighty or more of these fellowships, ranging in amount of stipend from \$300 to an amount in excess of fees to cover part of the student's living expenses.

The University requires of holders of regular University fellowships a modicum of service, which is done under the direction of the departments in which the appointments are made. Such service may consist of assistance in reading examination papers; work on a University journal; or assistance in one of the departmental laboratories, libraries, or museums. In no case is a fellow expected to devote so much time to the work here indicated as to interfere seriously with the pursuit of his particular study.

### II. ENDOWED AND ANNUAL FELLOWSHIPS

In addition to the regular University fellowships there are several special and annual fellowships for advanced study in specific fields. The appointments are made by the de-

partments to which these honors are assigned, and are usually made to persons who have begun resident study.

The amounts of the awards vary somewhat from year to year with changes in income and the number of recipients.

Following is a list of special and annual fellowships of particular interest to students in medicine:

*Fellowships in Graduate Medical Education* are granted to Doctors of Medicine who have completed one year of internship and who wish to further their knowledge of the medical sciences. During the period of the fellowship the student's work is divided between advanced clinical training and research, and may lead to the degree of Doctor of Philosophy. In addition to tuition, the fellow may receive a small stipend for his clinical work.

*The Mr. and Mrs. Frank G. Logan Fellowships*, endowed by Mr. Frank G. Logan, are awarded to students in the Department of Bacteriology and Parasitology. The annual stipend of each fellowship varies with the preparation of the student or investigator. Awards are made on the recommendation of the Dean of the Division of the Biological Sciences, with the approval of the President.

*The Arno B. Luckhardt Fellowship*, for research in physiology, is awarded upon the recommendation of the Chairman of the Department of Physiology.

*The John M. Prather Research Fund* provides income to be used for a fellowship or for research in zoölogy.

*The Anna Louise Raymond Fellowship in Medicine* is awarded biennially in support of work directed by Dr. Wilber E. Post.

*The Mary Strong Sheldon Fund* provides fellowships and scholarships for students in certain departments in the Divisions of the Biological and Physical Sciences.

*The Gustavus F. Swift Fellowship in Chemistry*, endowed by Mrs. Gustavus F. Swift as a memorial to her husband, is awarded for especial ability in research upon the nomination of the Department of Chemistry.

*The Talcott Fellowships*, endowed by Mr. William A. Talcott, are reserved for graduate students, preferably for graduates of Rockford College.

*The Helen Kimmings Van Liere Research Fellowship*, for advanced work in the Department of Physiology, was established by Dr. Edward J. Van Liere in memory of his wife.

*The William H. Wilder, Jr., Fellowship in Neurology*, established by Dr. and Mrs. William H. Wilder, is awarded to a student of neurology nominated by the Department of Anatomy upon recommendation of the professors in charge of neuro-anatomy and clinical neurology.

### III. SPECIAL RESEARCH FUNDS, INCLUDING RESEARCH FELLOWSHIPS AND RESEARCH FOUNDATIONS

By virtue of a series of benefactions several funds for research in medicine and related fields have been established. In some cases these provide full-time research positions for scholars who have completed their formal studies.

*The Dr. Wallace C. and Clara A. Abbott Memorial Fund* was established to benefit the cause of medical, chemical, and surgical science by supporting biological research which is basic to these sciences.

*The Bartlett Memorial Fellowship*, established in memory of Dr. Joseph Bartlett, provides funds for a biological chemist to collaborate "in research work looking to the finding of a satisfactory serum for the treatment and cure of pneumonia."

*The Frank Billings Memorial Fund* was established by friends of Dr. Frank Billings for support of teaching and research in internal medicine.

*The Watson Keep Blair Research Fund*, established by the will of Mrs. Alice Keep Blair in memory of her son, is used for research work in the Medical School.

The income from the *Norman Bridge Fund* is available for medical purposes.

*The Bella D. Brown Memorial Fund*, established by the late Alvia K. Brown in memory of his wife, is available for work in pediatrics.

*The Seymour Coman Research Fund* is used for fellowships which are given for scientific research with special reference to preventive medicine and the cause, prevention, and cure of diseases. The candidate must have the qualifications of the M.D. or Ph.D. degree and must devote his entire time to research. Appointments are made upon nomination of the Seymour Coman Research Committee.

*The Fenger Memorial Endowment Fund* is available for medical research in both clinical and nonclinical departments.

The income from the *Juliet G. Kaufman Memorial*, established by Mr. N. M. Kaufman, is available for medical purposes.

*The A. B. Kuppenheimer Foundation* was established by the will of Mr. Kuppenheimer for the study of venereal diseases.

*The Louise B. and Emma M. Kuppenheimer Foundation* was established for the study of structure, functions, and diseases of the eye.

*The Flora W. Lasker Fund* provides for support of medical education and research.

*The Charles Henry Markham Fund* provides for teaching, research, and clinical activities of the Departments of Medicine and Surgery.

*The John Rockefeller McCormick Memorial Endowment Fund* was established for the study and treatment of scarlet fever and other acute infectious diseases and allied problems. It is administered through the Department of Bacteriology and Parasitology.

*The George Roseman Nichols Fellowship* of the Frank Billings Clinic was endowed by Mrs. George Roseman Nichols.

*The Frederick Raymond Otis Memorial Fund*, established by Margaretta E. Otis, daughter of Frederick Raymond Otis, is available for medical work.

*The Benjamin J. Rosenthal Memorial Research Fellowship in Pediatrics*, established by Mrs. Benjamin J. Rosenthal and her two daughters through the Rosenthal Charities, which Mr. Rosenthal established in 1922, is awarded to a graduate medical student of high caliber for research into the causes, prevention, and cure of children's diseases.

*The Douglas Smith Foundation* was established for the investigation under the direction of the clinical departments of problems pertaining to the causes, nature, prevention, and treatment of human disease.

*The Kenneth G. Smith Fund* was created as an expendable fund for the furtherance of medical research, particularly in vascular diseases.

*The A. D. Thomson Medical Fund* is awarded for genito-urinary surgery.

*The Gerard Van Schaick Fund* is awarded for investigation of the pathology of the eye.

*The Orson C. Wells Fund* of the Frank Billings Clinic of the University of Chicago was established by the bequest of the late Orson C. Wells for the care of the sick, in teaching medicine and surgery, in the investigation of the cause and prevention of disease, and for allied purposes.

## B. SCHOLARSHIPS

### I. HONOR SCHOLARSHIPS

*Divisional Honor Scholarships* are assigned by the Committee on Fellowships and Scholarships to students for excellence in scholarship in Divisional work upon the recommendation of the various departments. These scholarships are available both to undergraduate and graduate students, and to those who have attained the equivalent status.

Honor Scholarships are regularly assigned for three quarters of the academic year and yield full or partial tuition fees.

Selection is made upon the basis of scholarship only. *Application is not required.*



## II. ENDOWED SCHOLARSHIPS

*Application.*—All applications for endowed scholarships are to be made to the Committee on Fellowships and Scholarships, Cobb Lecture Hall, Room 203, not later than June 1. Reports of awards are made during the summer. In general only students who have been in residence at least three quarters are eligible to apply for these scholarships, unless the terms of the gifts stipulate otherwise.

The endowed and special scholarships, with conditions of award, follow:

*The William Anderson Fund* provides annually one or more scholarships for needy and worthy students.

*The William J. Cook Fund* provides scholarships for needy and worthy boys graduated from Cook County high schools. Application is made through the high schools and colleges designated by the Chicago Community Trust to receive applications. University of Chicago applicants will communicate with the Committee on Fellowships and Scholarships.

*The Marie J. Mergler Scholarship* provides annual fees for a young woman student specializing in physiology.

*The James Nelson Raymond Scholarships*, established by Mrs. Anna Louise Raymond, provide partial tuition fees for two worthy and needy students in the Medical School.

*The Mary Strong Sheldon Fund* provides fellowships and scholarships for students in certain departments in the Divisions of the Biological and the Physical Sciences.

*The Frederick A. Smith Scholarship Fund*, established in 1920 by the will of Judge Frederick A. Smith, of Chicago, provides tuition for several students. Appointment is made on the basis of scholarship and need.

## III. THE LA VERNE NOYES FOUNDATION SCHOLARSHIPS

*The La Verne Noyes Foundation*, established July 5, 1918, by the gift of Mr. La Verne Noyes, provides part tuition fees for students who (1) shall themselves have served in the Army or Navy of the United States in the war for liberty into which the Republic entered on April 6, 1917, provided that such service was terminated by honorable discharge; or (2) shall be descendants by blood of anyone in service in the Army or Navy of the United States who served in said war; or (3) shall be descendants by blood of anyone who served in the Army or Navy of the United States in said war, provided that such service was terminated by an honorable death or an honorable discharge.

When sufficient funds are available, the following regulations governing eligibility obtain: (1) Veterans shall receive not less than one-half tuition if they have had five months or more of service. In cases of established need, the sons and daughters of veterans who died in service shall receive allotments equivalent to those given to veterans. (2) Descendants of veterans who served five months or more shall be granted aid in those cases in which need is established. This applies to new applicants only. (3) Where enlistment occurred after May 11, 1918 (six months prior to the Armistice), application of descendants will not be considered unless active overseas pre-Armistice service was rendered. Awards will be made to new applicants only in cases of established need. (4) Descendants of veterans shall be eligible for a continuance of aid only when they receive passing grades in at least one-half of the work for which they were registered in the last quarter or year of residence.

La Verne Noyes Scholarships are regularly assigned for only one quarter at a time but upon reapplication are continued during the student's period of residence in the University. Reapplication consists of an oral or written statement to the secretary (Cobb Lecture Hall, Room 203) that the scholarship is desired for a given quarter or for an academic year. Students in residence should make a request for the next quarter, or for the remainder of the academic year, at the time of receiving the voucher at the beginning of any quarter; or, in case of uncertainty, as soon as plans are formulated, but not later than two weeks in ad-

vance of the opening of the quarter. *Students not in residence* are required to make application in writing not less than two weeks in advance of the opening of the quarter in which they wish to receive tuition assistance from the Noyes Fund.

*Assistance for students eligible to receive aid from the Noyes Foundation is granted at all levels of the College, the Divisions, and the Professional Schools.*

#### IV. UNIVERSITY SCHOLARSHIPS

The University has provided funds of about \$6,000 annually from which scholarships paying half the tuition may be given medical students who have excellent scholastic records or who are unable to continue without such help. Application should be made to the Dean of Students in the Division of the Biological Sciences.

#### C. PRIZES

*The income from the Harry Ginsburg Memorial Fund*, established in memory of Harry Ginsburg, is awarded annually to a medical student in the Department of Physiology, the recipient to be designated by the Chairman of the Department upon the basis of industry, sincerity, and ability.

*The Howard T. Ricketts Prize* is awarded annually on the third day of May to a student of the University of Chicago presenting the best results in research in pathology or bacteriology.

#### D. MISCELLANEOUS AWARDS

In addition to the foregoing fellowships offered by the University of Chicago, there are the following fellowships, scholarships, or prizes—among many others—for which University of Chicago students are eligible to compete.

*The Joseph A. Capps Prize.* The Institute of Medicine of Chicago offers a prize of \$400 for the most meritorious investigation in medicine or in the fundamental sciences, provided that the work has a definite bearing on some medical problem. Competition is open to graduates of Chicago medical schools who have received the M.D. degree during the year 1931 or thereafter. Manuscripts must be submitted to the Secretary of the Institute of Medicine of Chicago, 122 South Michigan Boulevard, not later than December 31, 1943. In the case of a paper submitted by more than one author, it is stipulated that all the authors must qualify, and that the prize paper be published under the same authorship as that under which it was submitted. The winner of the prize will be expected to present the results of his investigation before the Institute at some meeting in 1944, the time to be designated later. If no paper presented is deemed worthy of the prize, the award may be withheld at the discretion of the Board of Governors.

*The John Simon Guggenheim Memorial Foundation Fellowships* offer to scholars, both men and women, opportunities under the freest possible conditions to carry on advanced study and research in any field of knowledge, or opportunities for the development of unusual talent in any of the fine arts, including music. Application should be made to the Secretary of the Guggenheim Memorial Foundation, 551 Fifth Avenue, New York City.

*The National Research Council Fellowships*, provided by the Rockefeller Foundation to promote scientific research, are awarded by the National Research Council. Fellows may choose the institution in which they desire to pursue research. Applications should be made to the National Research Council, Washington, D.C.

*The Rhodes Scholarships* at Oxford University are administered by the Rhodes Trust. The secretary of the committee for the state of Illinois is Mr. Carl Spaeth, Law School, Northwestern University. Mr. Robert V. Merrill is chairman of the University of Chicago committee. The Rhodes Scholarships have been discontinued for the duration of the war.

## E. UNIVERSITY SERVICE

### I. DIVISIONAL SERVICE SCHOLARSHIPS

A limited number of service scholarships are available for graduate students of attainment and promise. These scholarships yield an amount equivalent to the tuition fees in return for service in the departments in which the scholarships are awarded. Tuition must be paid or satisfactory arrangements made with the Bursar in advance; payment on service scholarships is made at the end of the quarter in which the service is rendered.

Assignments of this class are awarded preferably to students who desire to work in a special department rather than to those who desire to pursue general courses. Application should be made to the Committee on Fellowships and Scholarships during the period from January 1 to March 1. Appointments are made on April 1 for the year following.

### II. MISCELLANEOUS SERVICE

Other forms of student service are: (a) messenger service at the Information Office, applications for which should be addressed to the Bursar; (b) service in the University Choirs, applications for which should be addressed to the Director of the University Choirs; and (c) service in the Commons, for which the compensation is furnished in board. Applications should be addressed to the Director of the Commons.

### III. THE BOARD OF VOCATIONAL GUIDANCE AND PLACEMENT

Through the Board of Vocational Guidance and Placement the University maintains a bureau for the recommendation of students to teaching positions, to industrial and business connections, and to part-time employment while in the University.

The office of the Board of Vocational Guidance and Placement is in Cobb Lecture Hall, Room 215.

## F. LOAN FUNDS

From funds created by friends of the University loans are made to many students of worth and promise who need temporary aid. These funds are limited and are usually exhausted early in the academic year.

*The Kellogg Foundation* and the *Federal Security Agency* have provided loan funds for needy and promising medical students to assist them under the wartime accelerated program.

*The Clara M. Coit Loan Fund for Medical Students* is established to aid needy students who give promise of unusual service in medicine. Interest is charged at the rate of 4 per cent. Application should be made to the Dean of Medical Students.

*The Medical Students' Loan Fund*, established by the Physicians Association of Cook County, is available for medical students, preferably colored, and is loaned with interest at 4 per cent. Application should be made to the Dean of Medical Students.

The National Fraternity, Alpha Epsilon Iota, has available a loan fund contributed by its members in memory of one of its members, Jane Darling Stevenson. The loans are restricted to women medical students in advanced classes. Further information about this fund may be obtained from the Chairman of the National Committee, Monica Donovan, M.D., 450 Sutter Street, San Francisco, California.

## HOSPITALS, LABORATORIES, AND LIBRARIES

### I. THE HOSPITALS

Clinical facilities for medical students and research workers are afforded at the University Quadrangles by the University Clinics, which now comprise the Albert Merritt Billings Hospital and the Max Epstein Clinic, the Bobs Roberts Memorial Hospital for Children, the Chicago Lying-in Hospital and Dispensary, and, by affiliation, the Home for Destitute Crippled Children. The Clinics are designed primarily for the purpose of providing facilities for the instruction of students in clinical medicine and for the carrying-on of investigation and research.

THE ALBERT MERRITT BILLINGS HOSPITAL has a capacity of 222 beds intended for the use of the departments of Medicine and Surgery. The Max Epstein Clinic, located under the same roof, provides for the care of several hundred ambulatory cases daily. The laboratories of the departments of Medicine and Surgery are in close physical connection with the hospital.

THE BOBS ROBERTS MEMORIAL HOSPITAL FOR CHILDREN, adjacent to the Albert Merritt Billings Hospital, has a capacity of 73 beds and provision for a large out-patient department. The Department of Pediatrics has its laboratories on the ground floor and the fifth floor of the building, and centers its activities in it.

THE HOME FOR DESTITUTE CRIPPLED CHILDREN adjoins the Albert Merritt Billings Hospital and has a potential capacity of 68 beds for the care of crippled children. The Division of Orthopedic Surgery of the Department of Surgery is in charge of the professional services, and is provided with laboratories for research.

THE CHICAGO LYING-IN HOSPITAL AND DISPENSARY, in the block just west of the Bobs Roberts Memorial Hospital for Children, accommodates the Department of Obstetrics and Gynecology and has a bed capacity of 163. Student laboratories, classrooms, and research laboratories have been incorporated into the building for the use of the Department. The Max Epstein Clinic for out-patients materially increases the clinical facilities.

The total bed capacity of the University of Chicago Clinics at present is thus 526, and provision is made for more than 500 out-patients daily. The construction of the Charles Gilman Smith Hospital, with 56 beds for the treatment of contagious diseases, has been planned. In addition, through the Country Home for Convalescent Children and through affiliation with the Children's Memorial Hospital, the Clinics have abundant clinical material to supplement that available on the Quadrangles.

THE COUNTRY HOME FOR CONVALESCENT CHILDREN, at Prince Crossing, Illinois, forty miles west of Chicago, is owned and operated by the University of Chicago.

THE CHILDREN'S MEMORIAL HOSPITAL, 707 Fullerton Avenue, affiliated with the University of Chicago, has 264 beds.

THE PROVIDENT HOSPITAL was opened on May 15, 1933, in the premises bought from the Chicago Lying-in Hospital and formerly occupied by that institution. Alterations to meet the requirements of a general service hospital of 110 beds have been made; the "Max Epstein Clinic of Provident," with a capacity of 300 visits a day, has been created for out-patients; adequate laboratory facilities incorporated; and the entire institution fully modernized and equipped. Facilities for the clinical practice and training of Negro physicians and students are provided at a high level of professional and scientific adequacy. The Provident Hospital is associated with the University of Chicago.



## II. THE LABORATORIES

The Kent and the George Herbert Jones Chemical Laboratories, the Ryerson Physical Laboratory, and Eckhart Hall for Mathematical Science contain rooms for special research, small laboratories for investigations, large laboratories for general instruction, lecture-rooms, classrooms, library, museum, and offices.

The Hull Biological Laboratories are a group of buildings devoted to the study of the anatomical, botanical, and zoölogical sciences. The Whitman Laboratory of Experimental Zoölogy, the gift of Professor and Mrs. Frank R. Lillie, affords opportunity for research work in this department.

The Abbott Memorial Hall provides laboratories for physiology, biochemistry, and pharmacology adjoining the Albert Merritt Billings Hospital on the Quadrangles and comprises seven floors, including the ground floor. Mechanics' shops, storerooms, and freezing-room are located on the ground floor.

The section devoted to physiology includes large laboratories for undergraduate and graduate courses, for work in general physiology and in physiological optics, many research rooms and special laboratories for basal metabolism, electrocardiographic, and X-ray studies.

The section devoted to biochemistry provides on the lower floors large laboratories for the work of the fundamental courses, lecture-rooms, rooms for balances, ovens, polariscopes, solutions, Kjeldahl apparatus, hydrogen sulphide work, conferences, etc., large laboratories for advanced work together with many smaller rooms for research and work on special problems. One floor is devoted especially to work involving the application of physical chemistry to biological problems. The fifth floor is devoted to pharmacology providing laboratories for chemical and mammalian work, operating rooms, research rooms, and conference rooms. Animal rooms, operating rooms, sterilizing rooms, etc., are on the sixth floor.

The pathology building is incorporated with the buildings of the Billings Hospital and the University Clinics, and contains extensive laboratories.

The Frank Billings Medical Clinic incorporates within a single architectural unit the laboratories of the Department of Medicine and those portions of the Albert Merritt Billings Hospital and the Max Epstein Clinic in which the Department of Medicine cares for patients. The laboratories, which are unusually extensive and complete, afford facilities for teaching and for employment of the methods used in the investigation of diseases, including those common to medicine and biology, physiology and chemistry.

The facilities of the Surgical Department, which are all located in one building, comprise 100 beds in the Albert Merritt Billings Hospital, an out-patient department with separate divisions for general surgery and the surgical specialties, and classrooms and laboratories in the Medical School. Laboratory space in a students' room, where both routine and investigative work may be performed, is assigned to each student registered in the Department of Surgery. The Home for Destitute Crippled Children and the Country Home for Convalescent Children provide facilities for orthopaedic surgery.

Extensive laboratory facilities for medical students and research workers in the Department of Pediatrics are provided in the Bobs Roberts Memorial Hospital for Children. In this hospital, which adjoins the Albert Merritt Billings Hospital, laboratories and classrooms are in close physical connection with the hospital facilities and with the large Out-Patient Department. The entire fifth floor of the building and most of the ground floor are devoted to laboratories. Adequate equipment is provided for biochemical, physiological, biophysical, serological, and pathological research.

The Department of Obstetrics and Gynecology has its laboratories in a separate section erected by the University in the Chicago Lying-in Hospital group, immediately adjacent to the Mothers' Aid Pavilion in which all infected cases are treated. Special laboratories are

included for pathology, fetal pathology, biochemistry, physiological chemistry, bacteriology, and serology. In addition, a demonstration laboratory, a birthroom, and a library have been provided.

### III. THE LIBRARIES

The Libraries of the University include Harper Memorial Library and the Departmental Libraries. At present these libraries contain more than 1,406,000 volumes and receive currently about 5,000 periodicals, including in part the transactions and proceedings of learned societies.

Harper Memorial Library, often referred to as the General Library, is a reference and circulating library and is open to students in all departments of the University. Registered students who have paid their fees will secure an identification card which entitles them to withdraw books from any of the University Libraries. The General Library is open regularly on week days from 8:30 A.M. to 9:00 P.M.; on Saturdays from 8:30 A.M. to 5:30 P.M.; and during vacations from 9:00 A.M. to 1:00 P.M.

A rental library is located in the University Bookstore, 5802 Ellis Avenue. It contains some 60,000 volumes. These books, supplementing the general library system, are rented to members of the University at nominal fees.

Students in the Division of the Biological Sciences will be particularly interested in the Bio-Medical Libraries. These libraries contain over 108,000 volumes and receive currently over 1,000 periodicals. Holdings of these libraries are distributed as follows:

#### BIOLOGY LIBRARY, CULVER HALL, ROOM 201

**Hours.** Monday–Friday: 8:30 A.M.–9:00 P.M.

Saturday: 8:30 A.M.–1:00 P.M.

The Biology Library contains books and complete files of journals dealing with general biology, agriculture, anatomy, bacteriology, biochemistry, botany, physiology, veterinary science, and zoölogy. It likewise contains books dealing with the medical sciences published prior to 1938, excepting those dealing with gynecology, obstetrics, and ophthalmology. Back files of clinical journals, excepting those dealing with ophthalmology, are also shelved in the Biology Library. Total holdings of this library comprise more than 94,000 volumes, and the subscription list includes 470 periodicals.

#### FRANK BILLINGS MEDICAL LIBRARY, PATHOLOGY BUILDING, ROOM 209

**Hours.** Monday–Saturday: 8:30 A.M.–9:00 P.M.

Sunday: 1:00–5:30 P.M.

Billings Library is a reading-room of current clinical literature. It contains complete files of reference works, including literature indexes and abstract journals, but of other books and periodicals it contains only those published 1938 and later. Total holdings of this reading-room comprise more than 7,000 volumes, and the subscription list includes 580 periodicals.

#### LYING-IN LIBRARY, LYING-IN HOSPITAL, ROOM 173

**Hours.** Monday–Friday: 8:30 A.M.–5:00 P.M.

Saturday: 8:30 A.M.–12:00 NOON

The Lying-in Library contains complete files of reference works and books dealing with gynecology and obstetrics, but of periodical files dealing with the same subjects it contains only those published during the last five years. Total holdings comprise 4,000 volumes, and the subscription list includes 34 periodicals.

#### OPHTHALMOLOGY LIBRARY, BILLINGS HOSPITAL, ROOM S147

The Ophthalmology Library contains all books and complete files of periodicals dealing with ophthalmology. Total holdings comprise some 2,000 volumes.



## PROGRAMS OF WORK

Wherever possible, courses are so arranged that closely related material in different departments is presented during a given quarter, facilitating collaboration between instructors and better integration of material by the student.

### I. THE FIRST SIX (PRECLINICAL) QUARTERS

At least 18 courses and six quarters of full-time work are required;  $17\frac{1}{2}$  of the courses are devoted to a basic medical program required of all medical students. (See page 24.) Advanced courses may be substituted for those in the basic program subject to the approval of instructors. One of the 18 courses is elective. Subject to approval by the Dean of Students, elective courses may be taken in any field connected with medicine.

Students may not register in the clinical courses until the work of the first two years is satisfactorily completed. The departmental examination in pathology is deferred to the end of the third year, although at least 2 courses in pathology are required in the second year. Conjoint Clinical Course 301 is required before registration for clinical work in the University hospitals.

### II. THE LAST SIX (CLINICAL) QUARTERS

At least six quarters and 18 courses are required.

Five of the six quarters are devoted to hospital externships as indicated on page 25. Throughout these quarters the students are part of the hospital organization, with definite responsibilities toward patients. Training and instruction are largely by supervised doing. One quarter is devoted to elective work, which may be taken in any department of the medical school and may consist of student internships, with the consent of the chairman of the department and the Dean of Students.

NOTE.—Admission to State Board Examinations for license to practice medicine is contingent in some states on the satisfactory completion of certain courses in the Medical School. Specific information concerning the requirements in any state may be obtained in the office of the Dean of Students, or by writing the American Medical Association, 535 N. Dearborn Street, Chicago, for "Abstract of Laws and Board Rulings" (price sixty cents). The Illinois law governing license to practice in this state requires evidence that the minimum time between the commencement of the work of the Freshman year and the ending of the work of the Senior year, on which all students are required to be in attendance, shall be not fewer than forty months, except that for students matriculating or entering upon medical studies during the years 1942, 1943, and 1944, the course of training may be not less than thirty-six months. The Illinois law requires further that all applicants graduated since July, 1923, must also have completed a course of training of not fewer than twelve months in a hospital approved by the Department of Registration and Education.

### III. POST-DOCTORATE MEDICAL WORK

Opportunities and facilities for post-doctorate work exist in many departments of the Medical School. Attention is invited to the conditions under which such work may lead to the S.M. degree or to the Ph.D. degree as stated in the departmental announcements. Programs leading toward specialization in the work of clinical departments or divisions of departments may be undertaken by suitably qualified Doctors of Medicine. Previous correspondence with, and acceptance by, the department concerned is required.

## THE BASIC MEDICAL PROGRAM

## FIRST, SECOND, THIRD QUARTERS

Quarter	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
No. 1 Winter, 1944, and Autumn, 1944	Anat 305 9-11		Anat 305 9-12		Anat 305 9-12	
	Anat 301 1-4:30	Anat 301 1-4:30	Anat 301 1-4:30	Anat 301 1-4:30	Anat 301 1-4:30	
No. 2 Spring, 1944, and Winter, 1945	Physiol 251 Lab A 8-12	Biochem 201 9-11	Physiol 251 9-11	Biochem 201 9-10	Physiol 251 9-11	Biochem 201 9-10
	Physiol 251 Lab B 1-5	Biochem 201 Lab A 1-5	Anat 301 1-4:30	Biochem 201 Lab B 1-5	Anat 301 1-4:30	
No. 3 Autumn, 1943, and Summer, 1944, and Spring, 1945	Physiol 252 Lab A 8-12	Biochem 202 9-11	Physiol 252 9-11	Biochem 202 9-10	Physiol 252 9-11	Biochem 201 9-10
	Physiol 252 Lab B 1-5	Biochem 202 Lab A 1-5	Anat 301 1-4:30	Biochem 202 Lab B 1-5	Anat 301 1-4:30	

## FOURTH, FIFTH, SIXTH QUARTERS

Quarter	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
No. 4 Winter, 1944, and Autumn, 1944	Physiol 303 Lab A 8-12	Path 301 9-12	Physiol 303 9-11	Path 301 9-11	Physiol 303 9-11	Path 301 9-12
	Physiol 303 Lab B 1-5	Anat 306 1-4	Anat 306 1-4	Anat 306 1-4		
No. 5 Spring, 1944, and Winter, 1945	Path 302 9-11 Bact 204 11-12	Bact 202 9-12	Path 302 9-12	Bact 202 9-12	Path 302 9-12 C C C 300 12-1	
	Bact 204 1-4 Med 301 4-5	(Toxicol) elective 1-2	Bact 202 1-4	(Toxicol) elective 1-2 Med 301 4-5		
No. 6 Autumn, 1943, and Summer, 1944, and Spring, 1945	Pharm 301 9-11	C C C 301 9-11	Pharm 301 9-10	C C C 301 9-11	Pharm 301 9-10	C C C 301 9-11
		C C C 301* 1-5	Pharm 301 Lab A 1-5	C C C 301* 1-5	Pharm 301 Lab B 12-4	

\* Plus four hours of group instruction, arranged.

**SEVENTH, EIGHTH, NINTH QUARTERS**

Devoted to three clinical hospital externships: (1) Medicine 303, (2) Surgery 303, and (3) Obstetrics-Gynecology 303 plus Pediatrics 303. These may be taken in any order. One-third of the class is assigned to each externship each quarter. The hours in each are from 8 to 12 and 1:30 to 4:30, plus evening work when necessary. In addition, students attend Conjoint Clinical Course 302, Monday through Saturday, 12-1, and (Pathology) Tuesday and Thursday, 4:30-5:30. Attendance at departmental seminars and conferences open to students is expected. Departmental examinations in pathology are given at the end of the ninth quarter.

**TENTH, ELEVENTH, TWELFTH QUARTERS**

Devoted to two clinical out-patient externships: (1) Medicine 323 and (2) Surgery 304, 311, and 321, and to (3) an elective quarter. These may be taken in any order. One-third of the class is assigned to each. Each quarter, students attend Conjoint Clinical Course 350, Monday through Saturday, 8-9 A.M. The hours in medicine and surgery are 9-12 and 1:30-4:30. Attendance at departmental seminars and conferences open to students is expected. Departmental examinations in medicine, surgery, obstetrics-gynecology, and pediatrics are given at the end of the twelfth quarter. The student may defer all or part of these examinations for a quarter if he elects to register for more than six full quarters of clinical work. See page 12 for information on reduced fees for seventh quarter of clinical work.

## GENERAL COURSES IN THE SCHOOL OF MEDICINE

### CONJOINT CLINICAL COURSES

Three conjoint courses are offered by the several clinical departments in co-operation:

**301. Physical Diagnosis and History-Taking.**—A course given jointly by the departments of Medicine, Surgery, Obstetrics and Gynecology, and Pediatrics, consisting of a general introduction to the organization of the hospital, the techniques of physical, neurological, psychiatric, and laboratory diagnosis, the methods of history-taking, and the principles of medicine, surgery, pediatrics, and obstetrics. Intended specifically to prepare students for clinical externships in the University of Chicago Clinics. Prereq: Path 301. Aut, Tu, Th, 9–11, and 1–3; S, 9–11; and group instruction 4 hrs a week to be arranged; CLINICAL STAFF; EISELE, Secretary.

**302. Clinical Lectures.**—Lectures given jointly by the several departments.

*Pathology:* circulatory system, urinary tract, and male genital system. *Medicine:* heart, renal vascular diseases, infectious diseases, neurology. *Surgery:* principles of surgery. *Obstetrics and Gynecology:* normal labor, medical complications, and puerperal infections (12 lectures). *Pediatrics:* feeding and feeding disturbances. Win, M–S, 12; Tu, Th, 4:30.

*Pathology:* respiratory and alimentary tracts, liver and bile tracts, pancreas. *Medicine:* infectious diseases, diseases of the chest and gastrointestinal diseases. *Surgery:* thorax and abdomen. *Obstetrics and Gynecology:* toxemias of pregnancy, abnormal labors, operative obstetrics (12 lectures). *Pediatrics:* chest, respiratory, heart, and renal diseases. Sum, Spr, M–S, 12; Tu, Th, 4:30.

*Pathology:* blood and hemopoietic tissues, lymphatics, reticulo-endothelial system, spleen and endocrine system. *Medicine:* hematology, contagious diseases, psychiatry and metabolism. *Surgery:* orthopedics and urology. *Obstetrics and Gynecology:* hemorrhages of pregnancy, endocrines, benign and malignant tumors of the reproductive tract (12 lectures). *Pediatrics:* psychiatry, neurology, contagious diseases, premature and newborn disorders. Aut, M–S, 12; Tu, Th, 4:30; CLINICAL STAFF.

Credit included in externships in the hospital. Students other than externs may take the course as 1C. CLINICAL STAFF; DRAGSTEDT, Secretary.

**350. Clinical Lectures.**—Lectures given jointly by the several departments.

*Medicine:* gastrointestinal diseases and allergy. *Surgery:* head, neck, and plastic surgery and neurosurgery. *Obstetrics and Gynecology:* infections of the reproductive tract, relaxations and prolapse, diseases of the vulva, tuberculosis, and syphilis (12 lectures). *Pediatrics:* clinical cases. Win, M, W, Th, F, S, 8, STAFF; EISELE, Secretary.

*Forensic Medicine and Medical Jurisprudence:* pathology of traumatic injuries and other causes of unexpected death; forensic aspects of psychiatry, poisonings, and related medico-legal problems; legal aspects of medical practice. Win, Tu, 8, STAFF AND VISITING LECTURERS; HUMPHREYS, Secretary.

*Medicine:* allergy, arthritis, infectious diseases, nutrition, salt and water metabolism, acid-base equilibrium, psychiatry, endocrinology. *Surgery:* extremities and abdomen. *Obstetrics and Gynecology:* endocrinology of the female, sterility, hemorrhages of pregnancy (12 lectures). *Pediatrics:* clinical cases. Sum, Spr, M–S, 8, STAFF; EISELE, Secretary.

*Medicine:* dermatology. *Obstetrics and Gynecology:* malignant tumors of the reproductive tract, operative obstetrics, toxemias of pregnancy (12 lectures). *Pediatrics:* clinical cases. Aut, Tu, W, S, 8, STAFF; EISELE, Secretary.

*Public Health:* public health aspects of infectious diseases (including venereal infections), water purification, sewage disposal, protection of milk and food supply, industrial hygiene (emphasizing pneumoconiosis, occupational injuries, and occupational cancer), mental hygiene, and public health organization. The material is presented from the point of view of behavior of disease within the community. The public health aspects of tropical diseases are included under the lectures on Tropical Medicine and in Bacteriology and

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Parasitology 204; maternal and child hygiene and prevention and control of gynecologic diseases are included in the clinical lectures and during the externship. Aut, Th, 8, STAFF; HITE, Secretary.

*Tropical Diseases:* special problems in tropical medicine. Aut, F, 8, STAFF; FAREED, Secretary.

Credit included in externships in out-patient departments. Students other than externs may take 350 as 1C.

### GENERAL LECTURES

A series of lectures on medical economics, medical writing, and quackery is presented during the Autumn Quarter by DR. MORRIS FISHBEIN, Professorial Lecturer in the School of Medicine. No registration. No credit.



## THE DEPARTMENTS

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### THE DEPARTMENT OF ANATOMY

#### OFFICERS OF INSTRUCTION

WILLIAM BLOOM, A.B., M.D., Chairman of the Department of Anatomy and Professor of Anatomy.

CHARLES HENRY SWIFT, M.D., Ph.D., Secretary of the Department, Associate Professor of Anatomy, and Student Counselor.

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GEORGE WILLIAM BARTELMEZ, Ph.D., Professor of Anatomy.

STEPHEN POLYAK, M.D., Professor of Anatomy.

FRIEDRICH WASSERMANN, M.D., Professor of Anatomy, Zoller Memorial Dental Clinic.

WILTON MARION KROGMAN, Ph.D., Associate Professor of Anatomy.

MELVIN H. KNISELY, Ph.D., Assistant Professor of Anatomy.

SYLVIA HOLTON BENSLEY, A.B., M.D., Assistant Professor of Anatomy.

PETER PAUL H. DEBRUYN, M.D., Instructor in Anatomy.

TRUMAN S. POTTER, S.B., M.D., Research Associate and Seymour Coman Fellow in Preventive Medicine.

RUSSELL L. NICHOLS, S.B., M.D., Research Associate in Anatomy.

RAYMOND GORBOLD MURRAY, Ph.D., Research Associate in Anatomy.

CAROLINE MAY BENSLEY, S.B., Research Assistant in Anatomy.

DAVID BARRETT CLARK, Ph.D., Research Assistant in Neuroanatomy, Otho S. A. Sprague Memorial Institute.

JOSEPH SAVIT, S.B., Research Assistant in Anatomy.

JOHN F. THOMSON, S.M., Research Assistant in Anatomy.

HAROLD MITCHELL PECK, S.B., Research Assistant in Anatomy.

LOUISE WARNER, A.B., Research Assistant in Anatomy.

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ROBERT RUSSELL BENSLEY, A.B., M.D., Sc.D., Professor Emeritus of Anatomy.

CHARLES JUDSON HERRICK, Ph.D., Sc.D., Professor Emeritus of Neurology.

BASIL COLEMAN HYATT HARVEY, A.B., M.D., Professor Emeritus of Anatomy.

PRESTON KYES, A.M., M.D., Sc.D., Professor Emeritus of Preventive Medicine.

JEANNETTE B. OBENCHAIN, Ph.D., Research Associate Emeritus in Anatomy.

#### INTRODUCTORY

The Department of Anatomy is organized to provide for instruction and research in vertebrate anatomy, including human anatomy, histology, embryology, and neurology. Students of medicine and other students desiring to study anatomy are strongly recommended to plan their work so that courses in vertebrate anatomy and vertebrate embryology precede the work in human anatomy. Admission to the Division of the Biological Sciences is required of all students taking courses in the Department. Elementary physics and organic chemistry are recommended. All students taking courses in anatomy should have a good knowledge of French and German. For candidates for higher degrees this is indispensable.



## THE DEGREE OF BACHELOR OF SCIENCE†

On admission to the Division, each student specializing in the Department arranges, in consultation with the Departmental Counselor, a program of approximately 12 courses to be taken in the Department and related departments, in addition to elective work completed in the Division.

## HIGHER DEGREES

The Divisional requirements are stated on pages 66-67 of the *Announcements of the College and the Divisions*.

## MASTER OF SCIENCE

*The Departmental degree.*—Departmental prerequisites: Candidates for the degree of Master of Science in Anatomy are required to complete work in anatomy amounting to 9 courses, of which 3 courses must be in research.

*The Divisional degree.*—The Divisional degree is not awarded by the Department.

## DOCTOR OF PHILOSOPHY

*Departmental prerequisites.*—Candidates for the degree of Doctor of Philosophy in Anatomy should have credit for the medical courses in anatomy, or the equivalent. Advanced courses are selected after consultation with the Department. At least eight months before the final Doctor's examination, the candidate must have passed a preliminary examination.

## DOCTOR OF MEDICINE

All candidates for the degree of Doctor of Medicine are required to take the courses in anatomy listed in the medical program (see *Announcements of the School of Medicine*.)

The degree of Doctor of Medicine *with honors* in Anatomy is recommended when the student, in addition to completing all the work of the medical course with exceptional merit, has completed investigative work and prepared a dissertation acceptable to the Department.

## COURSES OF INSTRUCTION

Courses marked \* require payment of a laboratory fee by all except medical students.

**203. Evolution of Man** (identical with Anthropology 203).—A background study of human evolution. Theories and principles of organic evolution, primate origins and kinships, early types of man, the biological classification of races and their present distribution. C. Win, M, W, F, 10, KROGMAN.

**\*301, 305, 306. The Medical Courses in Anatomy.**—Lectures and laboratory work in human dissection, histology, and neurology. The division of this work into courses is simply for convenience in registration and distribution of material.

**\*301. Dissection of the Human Body.**—The purpose of this course is to acquaint the student with the functional anatomy of the major structures of the human body as demonstrable by dissection, X-ray and observations on the living. Emphasis is on the laboratory work. Course runs through two consecutive quarters, commencing on January 2, 1944. 3½Cs. Win, M-F, 1-4:30; Spr, W, F, 1-4:30, S, 10-12; SWIFT, KROGMAN, WASSERMANN, KNISELY, S. H. BENSLEY.

**\*305. Histology.**—The structure of the tissues and the organs of the body. C. Lab and lect: Sum, Tu, 8-10; Th, S, 8-11; Win, M, 9-11; W, F, 9-12; BLOOM, DEBRUYN.

NOTE.—Anatomy 305 is primarily for medical students. Others wishing to take the course must consult with the Department.

**\*306. Neurology.**—The structure of the nervous system and sense organs. Prereq: Zoöl 220, Anat 304, 305. C. Win, lab and lect, Tu, W, Th, 1-4, BARTELMIZ, POLYAK, S. H. BENSLEY, DEBRUYN.

† See pp. 65-66 of the *Announcements of the College and the Divisions*.

**311. Introductory Physical Anthropology** (identical with Anthropology 311).—C. Win, lect, M, W, F, 10; lab, S, 9–11; KROGMAN.

**314. Races of Man** (identical with Anthropology 314).—C. Spr, M, W, F, 9, KROGMAN.

**315. Laboratory Work in Physical Anthropology** (identical with Anthropology 315).—Win, hrs to be arranged, KROGMAN.

NOTE.—For descriptions of Courses 311, 314, and 315, see the Anthropology announcements.

**\*316. Elementary Neurology.**—Especially designed for non-medical students. C. Aut, M, W, F, 10–12, BARTELMEZ, POLYAK.

**\*323. Structure of the Female Reproductive Organs.**—Prereq: Zoöl 220 and histology. C. Spr, hrs to be arranged, BARTELMEZ.

**\*324. Organogeny.**—Based on the human embryological collection, about 1,200 specimens. A single system or several systems of organs studied in detail. Limited to 5 students. Prereq: Histology and embryology. C–2Cs. Aut, Win, Spr, hrs to be arranged, BARTELMEZ.

**\*325. Anatomy of Sense Organs.**—The gross and minute structure of eye and ear, their functions and associated nervous pathways. C, Aut, hrs to be arranged, POLYAK.

**\*330. Histophysiology of Circulation.**—Prereq: Consent of instructor. C. Win, Spr, hrs to be arranged, KNISELY.

**\*333. Morphology and Histogenesis of the Blood and Connective Tissues.**—Aut, hrs to be arranged, BLOOM, DEBRUYN; Spr, DEBRUYN.

**\*341. Advanced Work.**—Opportunities for advanced work in all branches of anatomy. C–2Cs each qr. Hrs to be arranged, STAFF.

**349, 350. History of Anatomy.**—A continuous course on the history of anatomy, running through the Autumn and Winter quarters.  $\frac{1}{2}$ C each qr. Hrs to be arranged, SWIFT.

**\*401. Anatomical Research.**—The laboratory is equipped for research, under the direction of the staff, in the following fields: Gross anatomy, neurology, histology, cytology, tissue culture, embryology, and physical anthropology. Registration only after consultation with the instructors. C–2Cs each qr. Hrs to be arranged, STAFF.

## THE DEPARTMENT OF BACTERIOLOGY AND PARASITOLOGY

### OFFICERS OF INSTRUCTION

WILLIAM HAY TALIAFERRO, PH.D., Chairman of the Department of Bacteriology and Parasitology and Eliakim Hastings Moore Distinguished Service Professor of Parasitology.

CLAY G HUFF, SC.D., Secretary of the Department and Professor of Parasitology.

STEWART ARMENT KOSER, PH.D., Professor of Bacteriology and Student Counselor.

R. WENDELL HARRISON, PH.D., Professor of Bacteriology, Walter G. Zoller Memorial Dental Clinic.

GAIL MONROE DACK, PH.D., M.D., Associate Professor of Bacteriology (on leave of absence).

WILLIAM BURROWS, PH.D., Associate Professor of Bacteriology.

FRANCIS BYRON GORDON, PH.D., M.D., Associate Professor of Bacteriology.

LUCY GRAVES TALIAFERRO, SC.D., Volunteer Research Associate in Parasitology.

KATHERINE EILEEN HITE, PH.D., M.D., Instructor in Bacteriology.

FREDERICK COULSTON, PH.D., Research Associate in Parasitology.

SAM BERKMAN, PH.D., Assistant in Bacteriology.

WILLIAM FLETCHER CANTRELL, S.M., Research Assistant in Parasitology.

MAURICE RALPH HILLEMANN, S.B., Assistant in Bacteriology.

DOROTHY FLORENCE HOSKINS, S.B., Research Assistant in Bacteriology.

RILEY DEE HOUSEWRIGHT, A.M., Research Assistant in Bacteriology, Markle Foundation.

HELEN B. JORDAN, S.M., Research Assistant in Parasitology.

ADALINE NICOLAS MATHER, S.B., Research Assistant in Bacteriology.

LEO ROBERT MELCHER, PH.D., Assistant in Bacteriology.

JOHN FREDERICK REBACK, S.M., Curator in Bacteriology.

FRANK MILTON SCHABEL, S.B., Research Assistant in Bacteriology.

MILTON SEGALOVE, S.B., Research Assistant in Bacteriology.

MICHAEL JOSEPH SURGALLA, S.B., Research Assistant in Bacteriology.

PAUL EVERETT THOMPSON, A.M., S.M., Assistant in Parasitology.

EMILE WEISS, S.M., Assistant in Parasitology.

AVIVAH ZUCKERMAN, S.M. Research Assistant in Parasitology.

HERMAN N. BUNDESEN, M.D., Professorial Lecturer on Health Administration.

### FELLOW, 1942-43

VIRGINIA GRACE MCGANN, S.M., Fellow in Bacteriology and Parasitology.

### INTRODUCTORY

The Divisional requirements for degrees are stated on pages 65-67 of the *Announcements of the College and the Divisions*.

### THE DEGREE OF BACHELOR OF SCIENCE†

On admission to the Division, each student specializing in the Department arranges, in consultation with the Departmental Counselor, a program of approximately 12 courses to be taken in the Department and related departments, and 6 elective courses, in addition to work completed in the College.

† See pp. 65-66 of the *Announcements of the College and the Divisions*.

### HIGHER DEGREES

A dissertation must be submitted as part of the requirement for the degrees of Doctor of Philosophy and the Departmental Master of Science. The work on which this dissertation is based may be done in any of the fields represented in the Department, such as bacteriology, parasitology, or immunology.

### MASTER OF SCIENCE

*The Departmental degree.*—A satisfactory dissertation is required; and, in addition to the equivalent of the requirement for the Bachelor's degree, 9 courses in the Department or related departments are required. The courses must be selected with the approval of the Chairman of the Department.

*The Divisional degree.*—Departmental prerequisites: A scholastic achievement equivalent to Courses 201, 225, 307, and 320. For general requirements see Divisional announcement concerning this degree (pp. 66-67 of the *Announcements of the College and the Divisions*).

### DOCTOR OF PHILOSOPHY

*Departmental prerequisites.*—A dissertation presenting the results of original research is required. This research must be conducted under the direction of the Department. In addition, Courses 201, 307, and 320 must be satisfactorily completed, together with such other courses offered by this Department or related departments as may be determined in consultation with the Chairman of the Department.

### DOCTOR OF MEDICINE

The course requirements for the degree of Doctor of Medicine in the Department of Bacteriology and Parasitology are listed in the *Announcements of the School of Medicine*.

Students who elect to become candidates for the degree of Doctor of Medicine *with honors* in the Department of Bacteriology and Parasitology must have (1) maintained a better than average grade for the four years of the medical curriculum and (2) done advanced work in excess of the minimum requirements as stated above, during at least three quarters, leading to the preparation of a dissertation acceptable to the Department and constituting an actual contribution to knowledge.

### DEPARTMENTAL CLUB

All candidates for higher degrees in the Department are expected to attend the meetings of the Bacteriology and Parasitology Club, which are held on alternate Thursdays throughout the year under the direction of members of the staff.

### COURSES OF INSTRUCTION

Courses marked \* require payment of a laboratory fee by all except medical students.

\*201. **General Bacteriology.**—Lecture and laboratory instruction in the fundamental principles of bacteriology and their applications, as based upon study of representative types of bacteria and allied micro-organisms. Designed for general science students. Prereq: Chem 104, 105, 120, Bot 101, Zoöl 101, and Physiol 101. C. Sum, Tu, Th, S, 9-12; Win, M, W, F, 2-5; KOSER.

\*202. **Medical Bacteriology.**—A lecture and laboratory course in the study of pathogenic bacteria, viruses, and immunology. Prereq: Admission to the Medical School. C. Spr, Tu, Th, 9-12; W, 1-4; GORDON, BURROWS.

\*204. **Medical Parasitology.**—Lectures and laboratory work upon the animal parasites of medical importance. Prereq: Admission to the Medical School or consent of Department.  $\frac{1}{2}$ C. Sum, Tu, 11, 1-4; Spr, M, 11, 1-4; HUFF.

225. **Public Health** (identical with Nursing Education 225).—A lecture course covering the fundamental aspects of the epidemiology of the infectious diseases, with emphasis upon the general biological aspects of the host-parasite relationship. C, Sum (or  $\frac{1}{2}$  1st Term), Tu, Th, S, 11; Spr, M, W, F, 11; HITE.



**308. Principles of Microbiology and Immunology.**—A general survey consisting of lectures on classification, morphology, and physiology of bacteria, animal parasites, and viruses, and the physiology and immunology of parasitism. Prereq: 202 or 307, and 204 or 320. C. Sum, M, W, F, 11, STAFF.

**\*320. Parasitology.**—A general survey of our knowledge of the parasites of man and animals. In three approximately equal parts: (1) protozoology, (2) helminthology, and (3) arthropods of parasitological importance. Limited to 18. Prereq: Consent of Department and Zoöl 101 or invertebrate zoölogy. C. Aut, Tu, Th, S, 9-12, HUFF.

**\*370. Advanced Bacteriology and Parasitology.**—Advanced work and research in the various fields of departmental specialization. Designed for students working toward higher degrees, but also available to a limited number of qualified students from other departments and to graduates in medicine. Prereq: Consent of individual staff member with whom the student registers. Each qr, hrs to be arranged, STAFF.

**351. Public Health.**—See Conjoint Clinical Courses, page 26.

#### COURSES NOT OFFERED IN 1943-44

**\*215. Immunology.**

**304. Immunology.**

**305. Cytotropic Viruses.**

**\*307. The Pathogenic Bacteria.**

**315. Physiology of Bacteria.**

## THE DEPARTMENT OF BIOCHEMISTRY

### OFFICERS OF INSTRUCTION

EARL ALISON EVANS, JR., PH.D., Chairman of the Department of Biochemistry and Professor of Biochemistry.

MARTIN EDWARD HANKE, PH.D., Associate Professor of Biochemistry and Student Counselor.

THOMAS FRANCIS GALLAGHER, PH.D., Associate Professor of Biochemistry.

HANS GAFFRON, PH.D., Research Associate in Biochemistry.

LOUIS SLOTIN, PH.D., Research Associate in Biochemistry.

BIRGIT VENNESLAND, PH.D., Instructor in Biochemistry.

MILTON SILVERMAN, PH.D., Research Associate in Biochemistry.

JOSEPH JAMES CEITHAML, PH.D., Research Associate in Biochemistry.

ALBERT MINTZ POTTS, PH.D., Research Associate in Biochemistry.

CARTER DUPUY JOHNSTON, JR., PH.D., Research Associate in Biochemistry.

WILLIAM PATRICK LONG, S.M., Research Assistant in Biochemistry.

EVELYN LEOLA BORGSTROM, S.M., Research Assistant in Biochemistry.

VINCENT PAUL HOLLANDER, S.M., Research Assistant in Biochemistry.

JAMES WILLIAM MOULDER, S.B., Assistant in Biochemistry.

LESTER RICE, S.M., Assistant in Biochemistry.

JOHN FREDERICK SPECK, S.B., Assistant in Biochemistry.

HENRY REIST KRAYBILL, PH.D., Professorial Lecturer in Biochemistry.

FRED CONRAD KOCH, PH.D., Frank P. Hixon Distinguished Service Professor Emeritus of Biochemistry.

FELLOW, 1942-43

ELOISE NEWCOMB, S.B.

### INTRODUCTORY

The Department offers courses in biochemistry for (1) medical students, (2) graduate students in the physical and biological sciences, and (3) those who wish advanced work in biochemistry in preparation for research or teaching careers in this field.

It is advisable that a student who proposes to specialize in this Department should obtain a broad scientific foundation, including work in the cognate sciences. The following courses are suggested as aids to the attainment of this objective: Physics 105, 106, 107; Mathematics through calculus; Chemistry 104, 105, 120, 221, 222, 240, 261; Physiology 202, 203; Zoölogy 101; Botany 101, 202; courses in histology, bacteriology, and comparative anatomy of vertebrates. A reading knowledge of German and French is advisable.

### DEGREES

The requirements for admission to the Division and the Divisional requirements for degrees are stated on pages 65-67 of the *Announcements of the College and the Divisions*.

### BACHELOR OF SCIENCE†

On admission to the Division, each undergraduate student specializing in the Department arranges, in consultation with the Departmental Counselor, a program of approxi-

† See pp. 65-66 of the *Announcements of the College and the Divisions*.

mately 12 courses to be taken in the Department and related departments, in addition to elective work completed in the College. This program includes Chemistry 221, 222, 230, 240, and 261, and a minimum of 3 courses in biochemistry: Biochemistry 201, 202, and 305 or 306. Other courses in this program may be Physiology 202, 203; Zoölogy 205, 220; Anatomy 305 or 309; Bacteriology 201; Physics 105, 106, 107; Mathematics 215, 216.

#### MASTER OF SCIENCE

*The Departmental degree.*—Departmental requirements: (1) Preliminary examination in analytical, organic, and physical chemistry, and in biochemistry; (2) ability to read German; (3) research for at least two quarters (course 401); (4) 6 graduate courses (excluding research); (5) thesis; (6) final oral examination; (7) participation in courses 308 and 410. A program including courses in related departments as well as in biochemistry will be made out in consultation with the Chairman of the Department.

The scope of the preliminary examinations is covered by Chemistry 120, 221, 222, 230, 240, 261, and Biochemistry 201 and 202. The chemistry examinations are given on the fourth Friday, and the biochemistry examinations on the fourth Saturday, of the Autumn and Spring quarters. The former should be taken during the first quarter of graduate residence, the latter in the first quarter following the completion of Biochemistry 202. These preliminary examinations must be taken at least two months before the degree is to be conferred.

*The Divisional degree.*—Departmental requirements: (1) At least 4 courses in biochemistry, including 305 and 306; (2) a bibliographic or historical essay on some phase of biochemistry; and (3) a final oral examination. The Divisional requirements are a broad training in biology and chemistry. A program will be made out in consultation with the Chairman of the Department.

#### DOCTOR OF PHILOSOPHY

*Departmental requirements.*—Advanced courses in biochemistry—305, 306, 307; Physiology 251 and 252; courses in advanced organic and special topics in chemistry; courses in comparative anatomy, histology, and bacteriology, and such additional courses as may be chosen to aid the student in his research problem. All graduate students in the Department are required to take part in the departmental seminars.

Before admission to candidacy for the Doctor's degree, the student is required: (1) to demonstrate his ability to read German and French; (2) to complete with a grade of B or better Biochemistry courses 305, 306, and 307; (3) to pass preliminary examinations in analytical, organic, and physical chemistry, and biochemistry; (4) to complete a research project, and (5) to present a dissertation satisfactory to the Department embodying the results of this examination; and (6) to pass a final oral examination.

The scope of the preliminary examinations is covered by Chemistry 120, 221, 222, 230, 240, 261, and Biochemistry 201 and 202. The chemistry examinations are offered regularly on the fourth Friday, and the biochemistry on the fourth Saturday, of the Autumn and Spring quarters. These examinations must be taken within the first four quarters of specialization in the Department. Research work done prior to passing these preliminary examinations is not credited toward completion of course requirements unless permission is granted through special petition to the Department. In most cases the student must complete the requirements for admission to candidacy before being assigned to a research problem. In every case permission from the Chairman of the Department must be obtained before the student is permitted to begin a research problem. Quarterly conferences with the Chairman on the next quarter's registration are required.

#### DOCTOR OF MEDICINE

The requirements for the degree of Doctor of Medicine include at least 2 courses in biochemistry—either 201 and 202, or 305 and 306.

In addition, a candidate for the degree of Doctor of Medicine *with honors* in Biochemistry must have maintained a better than average grade for the four years of the medical curriculum, and is required to prepare a thesis based upon independent research. Additional courses are advised in each case, to be taken as far as possible in this Department. The candidate's program should be so arranged that the research problem will extend over a period of three or more quarters. The candidate should also take part in the Departmental seminars.

## COURSES OF INSTRUCTION

Courses marked \* require payment of a laboratory fee by all except medical students.

NOTE.—The prerequisites indicated for Biochemistry 305, 306, and 307 must be required for regular medical students and for those who major in biochemistry, but special students may make arrangements after consultation with the instructor to enter the courses without the specific requirements.

**\*201. Chemistry of Cell Constituents.**—First required course for students in biochemistry. Chemistry of the carbohydrates, lipins, proteins, etc. Prereq: General and organic chemistry, qualitative and quantitative analysis. C. Spr: lect, Tu, 9–11; Th, S, 9; lab, *sec a*, Tu, 1–5; *sec b*, Th, 1–5; EVANS AND ASSISTANTS. (Win, University College, one sec, eves: lect, M, W, 7; lab, M, W, 8:30–10:30, F, 7–10; GALLAGHER AND ASSISTANTS.)

**\*202. Chemistry of Digestion, Metabolism, and Excretion.**—Second required course for students in biochemistry. Lectures only required for students majoring for higher degrees in biochemistry. Prereq: Biochem 201. C. Aut: lect, Tu, 9–11; Th, S, 9; lab, *sec a*, Tu, 1–5; *sec b*, Th, 1–5; VENNESLAND AND ASSOCIATES. (Sum, University College, one sec, eves: Lect, M, W, F, 7; lab, M, W, 8:30–10:30; GALLAGHER AND ASSISTANTS.)

**\*300. Introduction to Research.**—Designed to give the student preliminary training in research methods in direct collaboration with individual staff members. Prereq: Consent of Chairman of Department and individual staff member. C each qr. Hrs to be arranged, STAFF.

**\*304. Physicochemical Methods Applied to Biochemical Problems.**—The theoretical discussion and practical application of various physicochemical methods and considerations. Prereq: Biochem 305, 306, 307, and physical chemistry. C. Win, hrs to be arranged, HANKE.

**\*305. Advanced Biochemistry.**—For students who wish to take advanced work in biochemistry and for medical students who wish to emphasize biochemistry. Prereq: Physical chemistry (Chem 261) and organic chemistry (Chem 221) or their equiv, and Biochem 201 or equiv. Physical-chemical principles; the chemistry of amino acids, proteins, and enzymes. C. Aut: lect, M, W, F, 1; lab, M, W, 2–5; HANKE, EVANS.

**\*306. Advanced Biochemistry.**—An advanced course following Course 305. The organic chemistry of carbohydrates, porphyrins, sterols, and other biologically important substances. Selected topics in the metabolism of carbohydrates, fats, and proteins. Vitamins and hormones. Prereq: Biochem 305. Win: lect, M, W, F, 1; lab, M, W, 2–5; GALLAGHER, VENNESLAND.

**\*307. Advanced Biochemical Laboratory.**—A two-quarter laboratory course required of all students doing advanced work in biochemistry. Prereq: Biochem 201, 202, 305, 306. Individual work under the supervision of each member of the staff. C. Hrs to be arranged. Win, EVANS, VENNESLAND; Spr, HANKE, GALLAGHER.

**308. Current Literature in Biochemistry.**—A required course for all advanced students involving the presentation of reports of recent biochemical literature. Each qr, 1 hr wkly. F, 4, STAFF.

**\*321. Biochemical Preparations.**—The preparation of amino acids and derivatives, carbohydrates and derivatives, hormones and other substances, depending on the experience of the student. The work may be continued through several quarters. Prereq: Biochem 201. C. Hrs to be arranged. Aut, EVANS; Win, HANKE; Spr, VENNESLAND.

**332. Special Topics in Cellular Metabolism.**—An advanced course. Permeability, protein formation, viruses, enzymes, and enzymic inhibitors, assimilation. Prereq: Biochem 201 and 202 or equiv. Lecture, 2 hrs, and student report, 1 hr, wkly. C. Win, Tu, Th, S, 9, GAFFRON.

**\*401. Research in Biochemistry.**—C-2Cs each qr. STAFF.

**410. Seminar in Biochemistry.**—A joint seminar with the departments of Pharmacology and Physiology for the presentation of research reports. Each qr, 1 hr wkly. M, 4:30, ALL MEMBERS OF THE RESPECTIVE STAFFS.



**WALTER G. ZOLLER MEMORIAL DENTAL CLINIC****OFFICERS OF INSTRUCTION**

JAMES ROY BLAYNEY, S.M., D.D.S., Director of the Walter G. Zoller Memorial Dental Clinic and Professor of Dental Surgery.

R. WENDELL HARRISON, Ph.D., Professor of Bacteriology.

FRIEDRICH WASSERMAN, M.D., Professor of Anatomy.

SIGMUND FRANCIS BRADEL, D.D.S., B.M.E., Associate Professor of Dental Surgery.

ROBERT MARSHALL STEPHAN, S.M., D.D.S., Research Associate in Dental Surgery.

ELIZABETH HEMMENS, Ph.D., Instructor in Bacteriology.

ROBERT MANUEL WIENER, S.B., D.D.S., Assistant in Dental Surgery.

HAROLD JEROME GOLDBERG, D.D.S., Assistant in Dental Surgery.

PHILIP BURWASSER, A.M., D.D.S., Assistant in Dental Surgery.

JOHN A. MUNTZ, S.M., Research Assistant.

FRANK J. ORLAND, S.B., D.D.S., Assistant in Dental Surgery.

RICHARD LEE HOSKINS, D.D.S., Assistant in Dental Surgery.

The Walter G. Zoller Memorial Dental Clinic was established to provide complete dental care for indigent patients and for the study of dental disease. Completely equipped operating clinics have been established as an integral part of the Out-Patient Department Clinics in the Albert Merritt Billings Hospital, the Chicago Lying-in Hospital, the Home for Destitute Crippled Children, the Bobs Roberts Memorial Hospital for Children, and in the Country Home for Convalescent Children. Any patients who are hospitalized, or under medical management, in these institutions may readily be brought to the dental clinics for treatment provided they are financially unable to procure dental service. In contrast to the procedure frequently found in dental clinics located in hospital units, the service provided for patients is not limited to oral surgery but includes all phases of dental practice.

The Zoller Memorial Clinic offers one-year rotating internships to recent graduates of accredited dental schools who wish to avail themselves of the opportunity to study oral manifestations of systemic disease, and to gain additional experience in all phases of clinical practice. The intern year is fundamentally a teaching year, and therefore emphasis is placed upon the daily seminar which deals with problems arising in dental practice.

For those dental graduates who have had sufficient academic discipline to meet the requirements of the Division of Biological Sciences for work at the graduate level and who desire to train themselves for dental teaching, the Zoller Clinic offers several fellowships. The fellowship awards provide the opportunity for continued experience in clinical practice and graduate study in whatever department of biological science the fellow may elect. The Zoller Fund provides a reasonable stipend, free tuition for the courses in advanced work, and the expenses incurred by research activities. All advanced degrees are given by the department in which the graduate work is carried. For a more complete statement regarding the requirements for higher degrees, reference should be made to the announcements for the several departments. The Zoller Clinic has fully equipped research laboratories in the fields of anatomy, bacteriology, and biochemistry for the study of dental and oral problems. Fellows who are interested in these fields of science have an unusual opportunity to conduct dental research under the immediate supervision of the chief of each laboratory.

The Zoller Fund has an excellent library covering the entire field of dental and oral surgery. The volumes are filed and cataloged as part of the Library of the Biological Sciences.

Medical students are invited to attend the dental clinic for instruction in oral problems. For further information, those interested should consult the Director.

**DEPARTMENT OF MEDICINE****OFFICERS OF INSTRUCTION**

GEORGE FREDERICK DICK, M.D., Sc.D., Chairman of the Department of Medicine and Professor of Medicine.

CHARLES WESLEY EISELE, S.M., M.D., Secretary of the Department and Assistant Professor of Medicine.

PAUL CHESLEY HODGES, Ph.D., M.D., Professor of Roentgenology.

OSWALD HOPE ROBERTSON, S.M., M.D., Professor of Medicine.

DAVID SLIGHT, M.B., Ch.B., D.P.M., F.R.C.P.(C)., Professor of Psychiatry.

DUDLEY BILLINGS REED, A.B., M.D., Professor of Hygiene and Director of Health Service.

EMMET BLACKBURN BAY, S.B., M.D., Professor of Medicine.

ALEXANDER BRUNSCHWIG, S.M., M.D., Professor of Roentgenology.

CHARLES PHILLIP MILLER, S.M., M.D., Professor of Medicine, A.B. Kuppenheimer Foundation.

WALTER LINCOLN PALMER, Ph.D., M.D., Professor of Medicine.

ROBERT GUSTAV BLOCH, M.D., Professor of Medicine.

SAMUEL WILLIAM BECKER, S.B., M.D., Clinical Professor of Dermatology.

ALF ALVING, S.B., M.D., Associate Professor of Medicine, Kenneth G. Smith Fund.

E. S. GUZMÁN BARRÓN, S.B., M.D., Associate Professor of Biochemistry.

WRIGHT ADAMS, S.B., M.D., Associate Professor of Medicine, Kenneth G. Smith Fund.

ALLAN TITSWORTH KENYON, Ph.B., M.D., Associate Professor of Medicine.

HENRY TUBBS RICKETTS, S.B., M.D., Associate Professor of Medicine.

STEPHEN ROTHMAN, M.D., Associate Professor of Dermatology, A.B. Kuppenheimer Foundation.

RICHARD BIDDLE RICHTER, S.B., M.D., Associate Professor of Medicine.

MARIE ORTMAYER, Ph.B., M.D., Assistant Clinical Professor of Medicine.

RUTH ELAINE TAYLOR, S.B., M.D., Assistant Clinical Professor of Medicine, Health Service.

ALDEN KINNEY BOOR, Ph.D., M.D., Assistant Professor of Biochemistry, Kuppenheimer Foundation.

IRENE SANDIFORD, Ph.D., Assistant Professor of Medicine.

BENJAMIN FRANK MILLER, S.B., Ch.E., M.D., Assistant Professor of Medicine (on leave for military service).

LILLIAN EICHELBERGER, Ph.D., Assistant Professor of Biochemistry.

JULES HYMEN MASSERMAN, M.D., Assistant Professor of Psychiatry.

WARD CAMPBELL HALSTEAD, Ph.D., Assistant Professor of Experimental Psychology in the Division of Psychiatry, Otho S. A. Sprague Memorial Institute.

THEODORE JOHNSTON CASE, S.B., M.D., Assistant Professor of Neurophysiology in the Division of Psychiatry, Otho S. A. Sprague Memorial Institute.

ANNA HAMANN, M.D., Assistant Professor of Roentgenology.

HENRY BROSLIN, A.B., M.D., Assistant Professor of Psychiatry (on leave for military service).

GEORGE GOMORI, M.D., Ph.D., Assistant Professor of Medicine, Douglas Smith Foundation.

JOSEPH BARNETT KIRSNER, M.D., Ph.D., Assistant Professor of Medicine (on leave for military service).

CLAYTON G. LOOSLI, Ph.D., M.D., Assistant Professor of Medicine, Douglas Smith Foundation and Bartlett Memorial Fund.

ADRIAN HOLD VANDER VEER, A.B., M.D., Assistant Professor of Psychiatry.  
EVA RUTH BALKEN, Ph.D., Assistant Professor of Psychology in the Division of Psychiatry,  
Otho S. A. Sprague Memorial Institute.  
A. W. MARCOVICH, S.B., M.D., Assistant Professor of Roentgenology.  
RUSSELL HEDLEY MORGAN, A.B., M.D., Assistant Professor of Roentgenology.  
WILLIAM B. TUCKER, A.B., M.D., Assistant Professor of Medicine.  
HAROLD CLIFFORD WAGNER, S.M., M.D., Instructor in Medicine.  
GUSTAVE FREEMAN, Ph.B., M.D., Instructor in Medicine (on leave for military service).  
CHARLES L. DUNHAM, A.B., M.D., Instructor in Medicine (on leave for military service).  
KATHRYN KNOWLTON, Ph.D., Instructor in Medicine.  
THEODORE THOMAS PUCK, Ph.D., Research Associate in Medicine.  
RICHARD COAR BOYER, S.B., M.D., Instructor in Roentgenology (on leave for military  
service).  
SEYMOUR GRAY, A.B., M.D., Instructor in Medicine.  
ALF TORP HAEREM, S.B., M.D., Instructor in Medicine (on leave for military service).  
CHARLOTTE GERTRUDE BABCOCK, A.B., M.D., Instructor in Psychiatry.  
MARTIN GERHARD GOLDNER, M.D., Instructor in Medicine.  
DOROTHEA F. TURNER, S.M., Instructor in Medicine.  
MILTON LANDOWNE, S.B., M.D., Instructor in Medicine.  
OMAR JOHN FAREED, S.B., M.D., Instructor in Medicine.  
LEON ORRIS JACOBSON, S.B., M.D., Instructor in Medicine.  
ALFRED JOSEPH KLEIN, S.B., M.D., Instructor in Medicine (on leave for military service).  
ANNA SIVIA ELONEN, A.M., Instructor in Psychology in the Division of Psychiatry.  
GERT HELBRUNN, M.D., Clinical Instructor in Medicine.  
CHARLES LEWIS SPURR, S.M., M.D., Instructor in Medicine.  
LILIAN DONALDSON, M.D., Instructor in Roentgenology.  
A. B. HENNINGSEN, A.B., M.D., Instructor in Dermatology.  
HEINZ KOHUT, M.D., Instructor in Neurology.  
JAY EARL MCCORMICK, JR., S.B., M.D., Instructor and Resident in Psychiatry.  
HELEN VAN SANT, Assistant in Medicine.  
DANIEL STEVENS, Ph.D., Research Assistant in Medicine.  
RICHARD LOUIS LANDAU, M.D., Assistant in Medicine.  
ROGER R. LOUGH, M.D., Assistant and Assistant Resident in Roentgenology.  
JOSEPH MEYER, S.B., Research Assistant in Medicine.  
HENRY M. LEMON, S.B., M.D., Assistant in Medicine.  
WENDELL P. STAMPFEL, M.D., Assistant and Assistant Resident in Roentgenology (on  
leave of absence).  
HERBERT LACK, S.B., M.D., Assistant and Acting Resident in Roentgenology.  
FRANK R. BARTA, A.B., M.D., Assistant and Resident in Neurology.  
WILLIAM G. BEADENKOPF, A.B., M.D., Assistant and Resident in Medicine.  
GERHART SCHWARZ, M.D., Assistant and Assistant Resident in Roentgenology.  
THOMAS SINGER, S.M., Research Assistant in Medicine.  
GRANT ROGERS BARTLETT, Ph.D., Research Assistant in Medicine.  
CLARENCE C. BUTLER, A.B., M.D., Assistant and Assistant Resident in Medicine.  
HELMUT GUTMAN, M.D., Research Assistant in Medicine.  
HENRY WISE, S.B., Research Assistant in Medicine.  
MARVIN COMPTON PRICHARD, S.B., M.D., Assistant in Roentgenology.  
MATTHEW HAROLD BLOCK, Ph.D., Assistant in Medicine.  
NORMAN B. MCCULLOUGH, Ph.D., Research Assistant in Medicine.

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WINSTON HARRIS TUCKER, Ph.D., M.D., Professorial Lecturer on Public Health.  
ROBERT S. STONE, A.M., M.D., Visiting Professor of Roentgenology.

SIMEON T. CANTRIL, A.B., M.D., Visiting Assistant Professor of Roentgenology.  
JAMES J. NICKSON, S.B., M.D., Visiting Instructor in Roentgenology.

JOSEPH ALMARIN CAPPS, A.M., M.D., Clinical Professor Emeritus of Medicine.

## INTRODUCTORY

The Department of Medicine, as at present organized, represents the fields of general medicine, neurology, psychiatry, dermatology, and roentgenology. Instruction in all of these fields will be offered during the academic year 1943-44.

The Department occupies the Frank Billings Medical Clinic, which by virtue of its intimate physical relationship with the Albert Merritt Billings Hospital and the Max Epstein Clinic, concentrates all of the activities of the Department in a single architectural unit.

The Albert Merritt Billings Hospital provides approximately one hundred beds for the Department of Medicine, while the Max Epstein Clinic provides space and facilities for the examination and treatment of out-patients. The laboratories of the Department are equipped for the methods now usually employed in the investigation of disease, either in the study of the individual patient or in the advancement of knowledge concerning disease. They include the laboratories for physiology, bacteriology, serology, and chemistry.

## PLAN OF INSTRUCTION

The Department of Medicine aims to present the subject matter of medicine, that is to say, of disease, as a branch of human knowledge. It recognizes that instruction in this subject may be sought by the student for diverse reasons and with diverse ends in view. For this reason the courses have been planned with the view of presenting the range and variety of the subject matter of disease, so far as personnel and facilities permit, rather than of attempting to compress the whole of medicine into a standardized curriculum. Various orderly sequences are possible to meet various needs, and the Department undertakes to advise students in the selection and arrangement of courses when such advice is desired. Series of courses are suggested which will enable the average student studying for the degree of Doctor of Medicine to cover the ground required by the Department to fulfil State Licensing Board requirements.

Experience has shown that the subject matter of disease is best taught by allowing students both direct contact with patients and the opportunity to observe the actual work of investigators in clinical medicine. Therefore, the plan of instruction involves the division of the student body into small groups for the purpose of providing the maximum contact between students and patients and between instructors and students. The practical experience of the student is supplemented by the necessary amount of didactic instruction.

Each student whose work in the Department warrants it is assigned laboratory space according to his requirements, and he has access to this at all hours of the day or night. He also has access to equipment which is provided for common use, such as centrifuges, balances, sterilizers, incubator rooms, refrigerators, and hoods. It is the intention to provide each student with the facilities of a *medical* laboratory and to put these facilities freely at his disposal.

Students whose work brings them in contact with patients are required to wear clean white coats, of a design specified by the Department, whenever they enter parts of the Clinic to which patients are admitted.

## RESEARCH

In addition to assuming the task of teaching medicine, the Department places emphasis on its study of advancing knowledge with respect to disease. While the primary efforts of the Department in investigation are directed toward the study of disease processes, it is



recognized that strict adherence to this imposes limits which are too narrow, and that investigations in the Department may touch on all branches of science contributory to medicine. Students may pursue investigations under the direction of members of the Department, or, if properly qualified, may work independently, and such facilities as the Department has at its disposal are offered to research students and independent investigators. The Department already possesses funds from several endowments for the specific purpose of advancing medical knowledge.

For the purpose of carrying on its clinical and teaching duties and its research the Department is loosely subdivided into sections, each with a chief who has primary responsibility for dissertations based on studies pursued within his division and under his direction.

### FELLOWSHIPS

A number of fellowships, open to suitably qualified students, are available for research in the Department of Medicine. These fellowships, which as a rule provide a stipend and the expenses of research, are awarded to graduate students (with or without the M.D. degree) on recommendation of the Chairman of the Department, to whom application for further information should be made.

### DEGREES

#### MASTER OF SCIENCE

*The Departmental degree.*—Admission to study for the degree of Master of Science in the Department of Medicine is made upon the recommendation of the Departmental Committee on the Master of Science Degree.

The Department of Medicine recommends students for the degree of Master of Science in the Division of the Biological Sciences when the following requirements have been met:

1. Compliance with the regulations of the Divisional Faculty with regard to the technical requirements for the degree, including three full quarters of special advanced work.
2. Presentation of a satisfactory dissertation embodying the results of original research in one of the following fields: general medicine, neurology, psychiatry, dermatology, roentgenology, or biochemistry.
3. Certification of the candidate's fulfilment of the foreign-language requirements. Examination in ability to read German or French.
4. Successful completion of a course of study as approved by the Departmental Committee.
5. Successful completion of the Master's examination, designed to test the candidate's general medical knowledge as covered by Medicine 303 and 323, and his competency in his chosen field.

*The Divisional degree.*—The Divisional degree is not awarded in the Department.

#### DOCTOR OF PHILOSOPHY

Admission to study for the degree of Doctor of Philosophy in the Department of Medicine is based upon recommendation of the Departmental Committee on the Degree of Doctor of Philosophy. The student is admitted to candidacy upon passing a preliminary examination covering the field of general medicine. The scope of this examination is covered by Medicine 303 and 323.

The Department of Medicine recommends students for the degree of Doctor of Philosophy in the Department in the fields of medicine, neurology, psychiatry, dermatology, roentgenology, and medical chemistry when the following requirements have been met:

1. Compliance with the regulations of the Divisional Faculty with regard to the technical requirements for the degree.
2. Presentation of a dissertation embodying the results of original research. This must form an actual contribution to existing knowledge and be worthy of publication in a jour-

nal devoted to the medical sciences. Simple case studies or reports are not considered as coming within this definition.

3. Successful completion of the Doctor's examination. The candidate is examined not only as to his depth of knowledge in the particular fields treated by his dissertation but also as to his breadth of knowledge in general medicine and the medical sciences as a whole.

4. Certification by the appropriate departments of the candidate's fulfilment of the foreign-language requirements. Ability to read German and French is required.

5. Successful completion of a course of study as approved by the Departmental Committee. The degree of Doctor of Medicine will be considered as a preliminary requirement for candidates for the Doctorate of Philosophy in the fields of medicine, neurology, psychiatry, dermatology, and roentgenology, but not necessarily in medical chemistry.

### DOCTOR OF MEDICINE

The Department of Medicine certifies students as having received the approval of the Department for the degree of Doctor of Medicine when the following requirements have been met:

1. Satisfactory completion of not fewer than 6 courses on the graduate level (including advanced standing for work done elsewhere) in general medicine, neurology, psychiatry, dermatology, and roentgenology, of which not fewer than 3 courses shall have been in this Department.

2. Satisfactory completion of a written, practical, and oral examination covering the entire field of general medicine, neurology, psychiatry, dermatology, and roentgenology. This examination covers the field to which Courses 303 and 323 are devoted.

3. The M.D. degree *with honors* in Medicine is recommended on the basis of a better than average grade for the four years of the medical curriculum, and additional work in the Department leading to a thesis, which must have been presented to and accepted by the Department. The topic must have been chosen by the end of the Junior year and the Chairman of the Department notified of the topic. The thesis must have been submitted to the instructor under whose direction the work was done not later than two months preceding the granting of the four-year certificate.

## COURSES OF INSTRUCTION

### I. GENERAL MEDICINE

Conjoint Clinical Course 301. Introductory Course.—See page 26.

Conjoint Clinical Course 302.—See page 26.

Conjoint Clinical Course 350.—See page 26.

\*303. Externship in Hospital.—A course including Conjoint Clinical Course 302 and Med 320. Students make rounds daily with the chiefs of the various hospital services. They are assigned to patients and present their histories for discussion and criticism at these periods. Prereq: Path 302. 3Cs. Sum, Aut, Win, Spr, STAFF OF THE MEDICAL DEPARTMENT.

305. War Medicine.—Weekly lectures and seminars on subjects pertaining to military interests.  $\frac{1}{4}$ C. Sum, M, 2-4:30, STAFF.

306. Medical Dentistry.—A series of seminars.  $\frac{1}{4}$ C. Sum, Win, F, 2-4:30, BLAYNEY AND STAFF.

320. Clinical Conferences.—Required of the externs. No credit. W, 4:30-5:30.

\*323. Externship in Out-Patient Department. Medicine.—Students assigned to various special clinics in rotation in order to cover the fields of medicine as completely as possible. This course includes Conjoint Clinical Course 350. Required for all advanced courses. Prereq: 3Cs of Med 303 or the equiv. Sum, Aut, Win, Spr, STAFF; EISELE, Secretary.

325. Internship in Medicine.—Elective for selected Seniors after consultation with and approval by the Chairman of the Department and the Dean of Students. 3Cs. STAFF.

332. Hematology.— $\frac{1}{2}$ C. 1 qr yr. Afternoon hrs, W, F, JACOBSON, SPURR.

\* Required for all advanced courses.

353. **Arthritis. Out-Patient Department.**—Prereq: Consent of instructor.  $\frac{1}{4}$ C. Sum, Aut, Win, Spr, M, 2-4:30, FAREED.

355. **Medicine III. Out-Patient Department.**—Prereq: Consent of instructor.  $\frac{1}{4}$ C (M or F), or  $\frac{1}{2}$ C (M and F), Aut, Win, Spr, M, F, 1-4:30, EISELE AND STAFF.

356. **Allergy Treatment Clinic. Out-Patient Department.**— $\frac{1}{4}$ C. Sum, Aut, Win, Spr, S, 10-12, WAGNER.

357. **Diseases of the Chest. Out-Patient Department.**—Prereq: Consent of instructor.  $\frac{1}{4}$ C. Sum, Aut, Win, Spr, M, 2-4:30, BLOCH.

358. **Aviation Medicine.**—Lectures and demonstrations of problems peculiar to aviation medicine, including effects of anoxia, temperature, pressure, acceleration, and fatigue; neuropsychiatric aspects; pilot selection. Minimum registration, 15 students.  $\frac{1}{2}$ C. Spr, hrs to be arranged, RICKETTS.

359. **Metabolism. Out-Patient Department.**— $\frac{1}{4}$ C. Each qr. S, 10-12, KENYON.

360. **Advanced Gastroenterology: Gastroscopy.**—Limited to 1 student per quarter. Prereq: Consent of Department and adequate training in this special field. 3Cs. Sum, Aut, Win, GRAY.

361. **Seminar in Endocrinology.**— $\frac{1}{4}$ C. Win, M, 2:30-4:30, KENYON.

369. **Cardiology.**—Limited to 2 to 6 students.  $\frac{1}{4}$ C. Spr, M, 2-4, BAY.

370. **Clinical Electrocardiography.**—Limited to 2 to 6 students.  $\frac{1}{4}$ C. Aut, M, 2-4:30, ADAMS.

371. **Biochemical Laboratory Diagnosis.**—A critical study of the concentrations of chemical constituents in blood, urine, and other body fluids in relation to clinical diagnosis. Seminar open to 6 or more students.  $\frac{1}{4}$ C. Aut, Spr, F, 2-4, EICHELBARGER.

372. **Advanced Clinical Biochemistry and Physiology.**—This course may be taken as a laboratory course, limited to 1 or 2 students.  $\frac{1}{4}$ C. M, F, 2-4:30. It may also be taken as a seminar by 2 to 6 students. No credit. F, 2-3:30. Win, ALVING; Spr, BARRÓN.

373. **Protein Metabolism in Health and in Disease.**—A survey of the fundamental concepts of protein metabolism as related to nutrition and immunity and the maintenance of nitrogen balance. Wkly seminar.  $\frac{1}{4}$ C. Aut, Spr, M or F, 2-4:30, GRAY.

374. **Infectious Diseases.**—Limited to 3 to 4 students.  $\frac{1}{4}$ C. Win, F, 2:30-4, ROBERTSON, C. P. MILLER.

375. **Problems and Techniques in the Study of Human Circulation.**—A survey of major problems dealing with clinical investigation of cardiac, renal, and peripheral circulation. Emphasis placed on fundamental physiological principles. Wkly seminar limited to 4 to 8 students.  $\frac{1}{4}$ C. Win, M or F, 2-4:30, LANDOWNE.

376. **Pathology and Pathophysiology of Internal Diseases.**—Correlations between pathologic anatomy, physiology, and biochemistry of disease. Wkly seminars.  $\frac{1}{4}$ C. Sum, Win, M or F, 2-4:30, GOMORI.

401-5. **Research Courses in the Department of Medicine.**—Open to qualified students by arrangement with the chief of the division concerned. C-3Cs. DICK.

401. **Chemical Division.**—BARRÓN, EICHELBARGER.

402. **Physiological Division.**—PALMER, ALVING, KENYON, RICKETTS.

403. **Biological Division.**—ROBERTSON, MILLER.

404. **Diseases of the Respiratory System.**—BLOCH, TUCKER.

405. **Research in Gastroenterology.**—PALMER, GRAY.

Weekly conferences are held with the Department of Pathology and the clinical departments, on correlation of clinical study of cases with morbid anatomy. No credit. 1 hr wkly. Medical conference, W, 4:30; pathological conference, F, 4:30.

#### RELATED COURSE

**Forensic Medicine and Medical Jurisprudence** (included in Conjoint Clinical Course 350).—See page 26.

#### II. DERMATOLOGY

**Conjoint Clinical Course 302.**—See page 26.

\*323. **Externship in the Out-Patient Department.**—See above.

328. **Externship in the Out-Patient Department. Dermatology.**—Prereq: Med 323 or equiv.  $\frac{1}{4}$ C-C. Recommended for  $\frac{1}{4}$ C. Sum, Aut, Win, Spr, morning hours, ROTHMAN AND STAFF.

\* Required for all advanced courses.

**345. Therapy of Syphilis.**—Therapy as modified by all types of syphilitic processes. By arrangement, 3 hrs wky, ROTHMAN AND STAFF.

**362. Advanced Dermatology.**—Microscopic sections of pathologic skin specimens are studied; differential diagnosis discussed; lectures and demonstrations given on the basic sciences as applied in dermatology.  $\frac{1}{4}$ C. Aut, Win, Spr, F, 2-4:30, ROTHMAN AND STAFF.

**415. Research in Dermatology.**—A course open to qualified students by arrangement with chief of division. C-3Cs a qr. ROTHMAN AND STAFF.

**418. Seminar in Dermatology.**—Weekly conferences on investigations in progress, on current literature, and on subjects of current interest. Open to students on invitation only. No credit. 1 hr wky, ROTHMAN AND STAFF.

### III. NEUROLOGY

Conjoint Clinical Course 301.—See page 26.

Conjoint Clinical Course 302.—See page 26.

\*303. Externship in Hospital.—See page 42.

\*323. Externship in Out-Patient Department.—See page 42.

**331. Externship in Out-Patient Department.**—Limited to 4 students. Prereq: Consent of instructor.  $\frac{1}{4}$ C-C. Sum, Aut, Win, Spr, M, Tu, Th, F, 2-5, RICHTER, BUCHANAN.

Conjoint Clinical Course 350.—See page 26.

**416. Research in Diseases of the Nervous System.**—Prereq: Consent of instructor. C-3Cs. RICHTER, BUCHANAN.

### IV. ROENTGENOLOGY

**366. Clinical Roentgenology.**—The use of X-rays in diagnosis and of X-rays and radium in treatment. By arrangement with instructor.  $\frac{1}{4}$ C-3Cs. STAFF.

**367. Advanced Clinical Roentgenology.**—Continuation of Med 366. By arrangement with instructor. C-3Cs each qr. STAFF.

**413. Roentgenology Seminar.**—No registration. No credit. W, 6:45-8:30 P.M., Billings Hospital P117.

**414. Research in Roentgenology.**—C-3Cs. By arrangement with instructor. STAFF.

**Related Course in Department of Physics: Physics 349, Physics of Roentgenology.**—[Not given 1943-44.]

### V. PSYCHIATRY

**301. Medical Psychology.**—Lectures and clinics. Open to Sophomores.  $\frac{1}{2}$ C. Aut, Win, Tu, Th, 4, SLIGHT AND OTHERS.

**302. War Psychology and Psychiatry.**—Lectures on civilian morale, selective service, military psychiatry, and war neuroses. Open to medical students and to others by arrangement with instructor.  $\frac{1}{4}$ C. Aut, Win, Spr, Tu, 7 P.M., MASSERMAN.

Conjoint Clinical Course 301.—Sum. See page 26.

Conjoint Clinical Course 302.—Sum. See page 26.

\*303. Externship in Hospital.—See page 42.

**304. Methods of Psychotherapy.**—Principles, techniques, and indications for use. Course based on case studies.  $\frac{1}{4}$ C. Sum, Aut, Win, Spr, M, 2-4:30, SLIGHT.

\*323. Externship in Out-Patient Department.—SLIGHT, MASSERMAN, BABCOCK, McCORMICK. See page 42.

Conjoint Clinical Course 350.—Spr. See page 26.

**333. Ward Visits: Psychiatry.**—Prereq: Consent of instructor.  $\frac{1}{4}$ C. SLIGHT, MASSERMAN, BABCOCK, McCORMICK.

**346. Advanced Psychiatry.**—By arrangement.

**417. Research in Psychiatry.**—By arrangement. C-3Cs.



## THE DEPARTMENT OF OBSTETRICS AND GYNECOLOGY

### OFFICERS OF INSTRUCTION

WILLIAM JOSEPH DIECKMANN, S.B., M.D., Chairman of the Department of Obstetrics and Gynecology and Mary Campau Ryerson Professor of Obstetrics and Gynecology.

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M. EDWARD DAVIS, S.B., M.D., Professor of Obstetrics and Gynecology.

HENRY CLOSE HESSELTINE, S.M., M.D., Associate Professor of Obstetrics and Gynecology.

EDITH LOUISE POTTER, Ph.D., M.D., Assistant Professor of Pathology.

PRISCILLA OUDA, M.D., Instructor in Obstetrics and Gynecology, and Chief Anesthetist, Chicago Lying-in Hospital.

EDWIN FRANCIS DAILY, M.D., Instructor in Obstetrics and Gynecology (on leave of absence).

MELBOURNE WELLS BOYNTON, Ph.D., M.D., Instructor in Obstetrics and Gynecology (on leave for military service).

JOHN HAROLD MORTON, S.B., M.D., Instructor in Obstetrics and Gynecology (on leave for military service).

SIMON LLOYD WOLTERS, A.B., M.D., Instructor in Obstetrics and Gynecology (on leave for military service).

THOMAS GERALD GREADY, JR., A.B., M.D., Instructor in Obstetrics and Gynecology.

J. ROBERT WILLSON, S.M., M.D., Instructor in Obstetrics and Gynecology.

SYLVIA KRAMER, Ph.D., Instructor in Obstetrics and Gynecology.

ALICE CAMPBELL, A.B., M.D., Instructor in Obstetrics and Gynecology.

EUGENE G. FREE, S.B., M.D., Instructor in Obstetrics and Gynecology.

HOWARD KAHN, A.B., M.D., Assistant and Assistant Resident in Obstetrics and Gynecology.

WILFRED FINEGOLD, S.B., M.D., Assistant and Assistant Resident in Obstetrics and Gynecology.

VIENO WATIA, S.B., M.D., Assistant and Assistant Resident in Obstetrics and Gynecology.

DAVID KOPANS, A.B., M.D., Assistant and Assistant Resident in Obstetrics and Gynecology.

SIDNEY DRUCE, A.B., M.D., Assistant and Assistant Resident in Obstetrics and Gynecology.

CHRISTINE THELEN, A.B., Assistant and Assistant Resident in Obstetrics and Gynecology.

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FRED LYMAN ADAIR, A.M., M.D., Mary Campau Ryerson Professor Emeritus of Obstetrics and Gynecology.

### INTRODUCTORY

The Department of Obstetrics and Gynecology represents a unified department. Laboratory and office facilities for the Department are provided in the University's section of the new Chicago Lying-in Hospital and Dispensary in affiliation with the University of Chicago. The Hospital, which is adjacent to the other units of the University Clinics, contains clinical facilities for obstetrics, including an adult bed capacity of 163 and an outpatient department—a unit of the Max Epstein Clinic. All the facilities of this hospital and its dispensary, as well as all the facilities of the University Clinics, are available to the Department of Obstetrics and Gynecology.

Until a special gynecological pavilion is erected, part of the work of the Department will be conducted in the Albert Merritt Billings Hospital, which is located across the street from the Chicago Lying-in Hospital.

### PLAN OF INSTRUCTION

Obstetrics and gynecology are taught as a single subject, with emphasis on the close relationship of pregnancy, parturition, and the puerperium to disorders and diseases related to the generative organs of the human female. Clinical instruction and practical work are separated of necessity, but students receive instruction in both with at least 65 per cent stress on obstetrics, covering antepartum, intrapartum, and postpartum care. The general plan consists of introductory lectures, externships in the hospital and out-patient clinics, the opportunity to observe operations, normal and abnormal labors, and the opportunity to participate in the delivery of patients.

Special courses and the opportunity for investigative work are offered to those who are properly qualified to participate.

### HIGHER DEGREES

Candidates for higher degrees must be acceptable to the Department and conform to the general requirements of the Division of the Biological Sciences for these degrees. A higher degree is not recommended in Obstetrics and Gynecology until the candidate has proved his fitness to develop as a specialist in these branches.

A thesis is required which compares in magnitude with those usually required for such degrees in other branches.

### DOCTOR OF MEDICINE

In addition to the general requirements, all candidates for the degree of Doctor of Medicine are advised to complete a minimum of  $1\frac{1}{2}$  courses in obstetrics and gynecology, including participation in the care of confinement cases. Written and oral examinations must be satisfactorily completed.

Candidates for the M.D. degree *with honors* in Obstetrics and Gynecology must present a thesis which is acceptable to the Department and do work of a high order.

### INTERNSHIPS

Internships in obstetrics and gynecology are available, and applications for these internships must be filed early.

Two residencies are available each year.

### FELLOWSHIPS

Fellowships under the Douglas Smith and the Kuppenheimer foundations may be awarded to properly qualified candidates for research work in the Department of Obstetrics and Gynecology. These fellowships, which as a rule provide a stipend and the expenses of research, are awarded on recommendation of the Chairman of the Department, to whom application for further information should be made.

### COURSES OF INSTRUCTION

**Conjoint Clinical Course 301. Introductory Course.**—See page 26.

**Conjoint Clinical Course 302.**—See page 26.

**303. Externship Chicago Lying-in Hospital.**—A course in which students receive practical instruction in the care and study of patients. A considerable portion of the time is devoted to actual participation in the conduct of labor. Some time is given to the examination of patients, primarily obstetric, in the Max Epstein Clinic. This course includes Conjoint Clinical Course 302. Recommended in Junior year. Offered each quarter. Prereq: Conjoint Clinical Course 301.  $1\frac{1}{2}$ Cs. DIECKMANN DAVIS, HESSELTINE, AND STAFF.

**304. Externship Chicago Lying-in Hospital Out-Patient Clinic.**—Given in the Max Epstein Clinic. This course includes Conjoint Clinical Course 350. Offered daily, every morning or every afternoon, each quarter. Prereq: Obs and Gyn 303.  $\frac{1}{2}$ C–3Cs. DIECKMANN, DAVIS, HESSELTINE, AND STAFF.

**305. Practical Course Chicago Lying-in Hospital.**—Study and observation of cases in birthrooms with participation in the conduct of labor. Each quarter. Two full weeks. Prereq: Obs and Gyn 303.  $\frac{1}{2}$ C. DIECKMANN, DAVIS, HESSELTINE, AND STAFF.

**308. Special Pathology in Obstetrics and Gynecology.**—For students especially interested in the field of gross and microscopic pathology. Offered once weekly in the Autumn and Spring quarters. Limited to 15 students. Prereq: Obs and Gyn 303.  $\frac{1}{2}$ C. DAVIS, POTTER.

**309. Pathology of the Fetus and Newly Born Infant.**—A discussion of the pathologic conditions affecting the fetus before delivery and the infant in the first few days of life. The anatomy and physiology of the fetus and the newborn are briefly reviewed. Prereq: Obs and Gyn 303.  $\frac{1}{2}$ C. Win, F, 1:30–4:30, POTTER.

**325. Internship in Obstetrics and Gynecology.**—Elective for selected Seniors after consultation with and approval by the Chairman of the Department and the Dean of Students. 3Cs. STAFF.

**Conjoint Clinical Course 350.**—See page 26.

**351. Advanced Work in Obstetrics and Gynecology.**—Special courses in clinical, laboratory, and experimental work may be arranged during any quarter. Prereq: 3 courses in Obstetrics and Gynecology. Credit as arranged. DIECKMANN, DAVIS, HESSELTINE.

**401. Research in Obstetrics and Gynecology.**—A course open to qualified students by arrangement. Prereq: 3 courses in Obstetrics and Gynecology. Credit as arranged. DIECKMANN, DAVIS, HESSELTINE, POTTER.

**411. Seminar.**—Open to graduate and undergraduate students. No credit. W., 4:30–5:30. STAFF.

## THE DEPARTMENT OF PATHOLOGY

### OFFICERS OF INSTRUCTION

PAUL ROBERTS CANNON, PH.D., M.D., Chairman of the Department of Pathology and Professor of Pathology.

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MAUD SLYE, A.B., Sc.D., Associate Professor of Pathology.

JULIAN HERMAN LEWIS, PH.D., M.D., Associate Professor of Pathology, Otho S. A. Sprague Memorial Institute.

EDWIN F. HIRSCH, PH. D., M.D., Research Associate in Pathology.

ELEANOR MARY HUMPHREYS, A.B., M.D., Associate Professor of Pathology.

PAUL EBY STEINER, M.D., PH.D., Associate Professor of Pathology.

HOWARD CARL HOPPS, S.B., M.D., Assistant Professor of Pathology.

MERCY AURORA SOUTHWICK, M.D., Curator and Instructor in Pathological Technique.

D. WARREN STANGER, PH.D., Instructor in Chemistry, Commonwealth Fund.

CLARENCE C. LUSHBAUGH, PH.D., Instructor in Pathology.

SHIH-DOH WU, S.B., M.D., Assistant Resident and Research Assistant in Pathology, Douglas Smith Foundation.

ROBERT WILLIAM WISSLER, S.M., Instructor in Pathology.

OLAF K. SKINSNES, A.B., Assistant in Pathology.

EDITH FARRAR, A.B., Assistant in Pathology.

WILLIAM E. CHASE, S.M., Assistant and Research Assistant in Pathology.

CHARLES GROVE GABELMAN, JR., S.B., Assistant in Pathology.

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LUDVIG HEKTOEN, M.D., Sc.D., LL.D., Professor Emeritus of Pathology; Director Emeritus of the John McCormick Institute for Infectious Diseases.

HARRIET F. HOLMES, A.B., Research Associate Emeritus in Pathology.

### FELLOW, 1942-43

FLOYD SAVILLIAN STANCLIFFE, A.B., S.M., Mary Strong Sheldon Fellow.

### INTRODUCTORY

The courses offered in the University by the Department include the required work in pathology in the curriculum of the study of medicine, as well as advanced courses arranged for those desiring a more extended knowledge of the subject, and those wishing to qualify themselves for research.

### HIGHER DEGREES

The Divisional requirements for higher degrees are outlined on pages 66-67 of the *Announcements of the College and the Divisions*.

### MASTER OF SCIENCE

*The Departmental degree.*—Departmental prerequisites: a dissertation and 8 courses of work for a higher degree in pathology are required, if all the work is in pathology. Substitution of courses in bacteriology and immunity may be made with the approval of the Chairman of the Department, but Pathology 301, 302, 303, and at least 3 courses of research must be taken in the Department of Pathology.

*The Divisional degree.*—The Divisional degree is not awarded by the Department of Pathology.



### DOCTOR OF PHILOSOPHY

*Departmental prerequisites.*—Courses required of all candidates are Pathology 301, 302, and 303, Bacteriology 202, and a course covering the fundamental principles and methods of immunology. Courses in bacteriology and parasitology may be accepted as equivalent to courses in pathology to a maximum of 5 courses with the approval of the Chairman of the Department. A dissertation must be presented containing the results of original research, prepared under the direction of an officer of the Department but so conducted as to indicate the ability of the candidate to conduct independent original investigation.

### DOCTOR OF MEDICINE

The minimum course requirements for the degree of Doctor of Medicine in the Department of Pathology are as listed in the *Announcements of the School of Medicine*.

The student must pass a general departmental examination in pathology. This is given on the completion of Conjoint Clinical Course 302, and its scope corresponds to the field covered by Pathology 301, 302, and the part of Conjoint Clinical Course 302 which is devoted to pathology. The examination would thus be taken ordinarily at the end of the third year of medical work.

Students who elect to become candidates for the degree of Doctor of Medicine *with honors* in the Department of Pathology must have (1) maintained a better than average grade for the four years of the medical curriculum and (2) done advanced work, in excess of the minimum requirements as stated above during at least three quarters, leading to the preparation of a dissertation acceptable to the Department of Pathology, and constituting an actual contribution to knowledge.

### COURSES OF INSTRUCTION

Courses marked \* require payment of a laboratory fee by all except medical students.

**\*301. General Pathology and Pathological Histology.**—A practical laboratory course in general pathological histology, supplemented by the study of gross specimens, attendance at necropsies, and by recitations in general pathology. Prereq: Histology, physiology, biochemistry, and visceral anatomy. Laboratory, recitations, and lectures: 8 hours a week. Win, Tu, S, 9-12; Th, 9-11; HUMPHREYS, STEINER, HOPPS, AND ASSISTANTS.

**\*302. Pathology of Infectious Granulomas and Tumors.**—Sum, Tu, 9-11; Th, S, 9-12; Spr, M, 9-11; W, F, 9-12; STEINER, HUMPHREYS, HOPPS, AND ASSISTANTS.

**\*401. Research in Pathology.**—A course open to a limited number of qualified students and graduates in medicine. Hrs to be arranged for each student. Each qr, CANNON, HUMPHREYS, STEINER, HIRSCH, HOPPS.

**Conjoint Clinical Course 302.**—Special pathology for Juniors. Sum, Aut, Win, Spr, Tu, Th, 4:30-5:30, CANNON, HUMPHREYS, STEINER, HIRSCH, HOPPS.

**Joint conferences** of clinical departments with the Department of Pathology on correlation of clinical studies with necropsy findings are held on Friday at 4:30. No credit.

Also available in the Department is a six months' course offering training in surgical and morgue pathology and providing full maintenance at St. Luke's Hospital. Appointments begin January 1 and July 1 and are limited to two each. Seniors or Juniors with special qualifications accepted.

### RELATED COURSE

**Forensic Medicine and Medical Jurisprudence** (included in Conjoint Clinical Course 350).—See page 26.

## THE DEPARTMENT OF PEDIATRICS

### OFFICERS OF INSTRUCTION

FREDERIC W. SCHLUTZ, S.M., M.D., Chairman of the Department of Pediatrics and Richard T. Crane Professor of Pediatrics.

ARCHIBALD HOYNE, S.B., M.D., Clinical Professor of Pediatrics.

DOUGLAS N. BUCHANAN, A.M., Sc.B., M.B., Ch.B., Assistant Professor of Pediatrics.

ARTHUR RAY TURNER, A.B., M.D., Assistant Professor of Pediatrics (on leave for military service).

PARKER DOOLEY, S.B., M.D., Assistant Professor of Pediatrics.

FRANCIS HOWELL WRIGHT, M.D., Assistant Professor of Pediatrics.

MINERVA MORSE, Ph.D., Research Associate in Pediatrics, Douglas Smith Foundation.

HELEN GERTRUDE OLDHAM, Ph.D., Research Associate in Pediatrics.

DONALD ERNEST CASSELS, A.B., S.B., M.D., Assistant Professor of Pediatrics (on leave for military service).

HELMUT P. SECKEL, M.D., Assistant Clinical Professor of Pediatrics.

LOUIS T. CAMPBELL, A.B., M.D., Instructor in Pediatrics, Bella D. Brown Fund (on leave for military service).

FRANCES A. JOHNSTON, Ph.D., Research Associate in Pediatrics.

ELEINE THOMAS, S.M., M.D., Instructor in Pediatrics, Bella D. Brown Fund.

HELEN DICKERSON HEINEN, S.M., M.D., Instructor and Resident in Pediatrics.

FRANCES LLOYD NAYLOR, Ph.D., Research Assistant in Pediatrics.

ALVIS JOE SCULL, JR., M.D., Assistant and Assistant Resident in Pediatrics.

### FELLOW, 1943-44

MARIANO LATORRE, M.D., Benjamin J. Rosenthal Research Fellow.

LUIS TORRES BARBOSA, M.D., American Academy of Pediatrics Fellow.

## INTRODUCTORY

The Department of Pediatrics as now organized represent the fields of general pediatrics, preventive pediatrics, and contagious diseases. Instruction in all these fields will be offered during the academic year 1943-44.

The Department is located in the Bobs Roberts Memorial Hospital for Children, which houses the in-patient and out-patient services of the Pediatric Clinic, the preventive pediatric welfare stations, and all the research laboratories and facilities available to the Department for scientific investigations in these fields.

The pediatric material of the in- and out-patient services of the Provident Hospital, the Children's Memorial Hospital, the Country Home for Convalescent Crippled Children, the Orthopedic Hospital, the Orthogenic School, and the Nursery School is, to some extent, available to the Department as teaching material.

The entire newly born service of the Department of Obstetrics has, by consent of that staff, been placed in charge of the Pediatric Department and is cared for at the Lying-in Hospital by the Pediatric Staff.

Instruction in contagious diseases is at present given in the Municipal Contagious Disease Hospital, supplemented by didactic lectures in Conjoint Clinical Courses 350 and 351.

## RESEARCH

Properly qualified students are offered every opportunity for research work, and a limited number of residencies and assistant residencies are available in the Department. Applicants for the residencies must have the degree of Doctor of Medicine and have had at least one year of pediatric internship.

## FELLOWSHIPS

Some fellowships for research in pediatrics are open to suitably qualified students. They provide a stipend and the expense of the research and are open only to graduate students with, or without, the degree of Doctor of Medicine. The applicant must be recommended by the Chairman of the Department.

## DEGREES

### MASTER OF SCIENCE AND DOCTOR OF PHILOSOPHY

Properly qualified candidates may be eligible for the higher degrees of Master of Science and Doctor of Philosophy.

The degrees of Master of Science and Doctor of Philosophy are recommended only for students who have (1) submitted a thesis embodying original research in the field of pediatrics, approved by the Department of Pediatrics, (2) completed satisfactorily an amount of advanced work equivalent to that required for the degree of Master of Science or of Doctor of Philosophy, as required by the Division of the Biological Sciences, and (3) fulfilled the other Divisional requirements as stated on pages 65-67 of the *Announcements of the College and the Divisions*.

The Divisional Master's degree is not given in the Department.

### DOCTOR OF MEDICINE

All candidates for the degree of Doctor of Medicine are required to complete a minimum of 1½ courses in pediatrics. Written, practical, and oral examinations must be satisfactorily completed. Candidates for the degree of Doctor of Medicine *with honors* in Pediatrics must have completed a productive piece of research, in addition to having maintained a better than average grade for the four years of the medical curriculum.

## COURSES OF INSTRUCTION

**Conjoint Clinical Course 301. Introductory Course.**—See page 26.

**Conjoint Clinical Course 302.**—See page 26.

**Conjoint Clinical Course 350.**—See page 26.

**Public Health** (included in Conjoint Clinical Course 350).—See page 26.

**303. Pediatric Externship.**—Students are assigned to hospital service and out-patient department for 3 weeks each. Limited to 8 students. Includes work in Ped 352. Prereq: Con Clin Course 301 or equiv, Path 302. 1½Cs each qr. Daily, 9-4:30, SCHLUTZ, DOOLEY, WRIGHT, AND STAFF.

**304. Senior Externship.**—General pediatrics and therapeutic procedures. Limited to 6 students. It is recommended that students take at least 1 course in this work. Prereq: Con Clin Course 301 or equiv, Path 302, Ped 303. 2 half-days wkly, ½C; 4 half-days wkly, C; 6 half-days wkly, 1½Cs. Each qr, daily, 9-12, SCHLUTZ, DOOLEY, WRIGHT, AND STAFF.

**305. Contagious Diseases.**—Instruction given at the Municipal Contagious Disease Hospital in the diagnosis and treatment of all types of contagious disorders. Limited to 7 students.\* ½C. Each qr, Tu, Th, 4-6, HOYNE. Supplementary lectures by DR. DICK and DR. SCHLUTZ are included in Con Clin Course 350.

**306. Pediatric Psychiatry, Third and Fourth Years.**—Limited to 12 students. ¼C. Aut, Win, Spr, M, 3-4:30, VANDER VEER.

\* Vaccination against scarlet fever and diphtheria is required in advance.

307. **Diseases of the Nervous System.**— $\frac{1}{4}$ C. Each qr, hrs to be arranged, BUCHANAN.
308. **Pediatric Externship, Children's Memorial Hospital.**—Limited to 6 students. Optional with the student to take part of the clerkship at the Children's Memorial Hospital and part in other elective assignments at the University of Chicago Clinics. Prereq: Ped 303. 12 wks, 3Cs; 8 wks, 2Cs; 4 wks, C. Each qr, daily, 9-5, ALDRICH AND STAFF.
310. **Pediatric-Roentgenology Conference.**—Third- and fourth-year students. No credit. Each qr, W, 3:15, PEDIATRICS AND ROENTGENOLOGY STAFFS.
320. **Seminar in Pediatrics.**—Third- and fourth-year students. No credit. Each qr, W, 3:15, PEDIATRICS STAFF.
325. **Internship in Pediatrics.**—Elective for selected Seniors after consultation with and approval by the Chairman of the Department and the Dean of Students. 3Cs. STAFF.
352. **Preventive Pediatrics (Welfare Clinic).**—Practical instruction in care and feeding of normal infants with demonstration of food preparation. Fourth year. Limited to 10 students.  $\frac{1}{2}$ C each qr, Tu, Th, 2-4:30; DOOLEY, WRIGHT, AND STAFF.
402. **Research and Advanced Work in Pediatrics.**—Open to qualified students by arrangement with the Chairman of the Department. C-3Cs. Hrs to be arranged, SCHLUTZ, DOOLEY, WRIGHT, AND STAFF.

Weekly conferences are held with the Department of Pathology and the clinical departments on correlation of clinical study of cases with morbid anatomy. Open to students on invitation only. No credit. Each qr, F, 4:30.



## THE DEPARTMENT OF PHARMACOLOGY

### OFFICERS OF INSTRUCTION

EUGENE MAXIMILIAN KARL GEILING, PH.D., M.D., Chairman of the Department of Pharmacology and Frank P. Hixon Distinguished Service Professor of Pharmacology.

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CRAWFORD FAIRBANKS FAILEY, PH.D., Research Associate in Pharmacology (Associate Professor).

WILLIAM LEWIS DOYLE, PH.D., Research Associate in Pharmacology (Assistant Professor).

JULIUS MOSHER COON, PH.D., Instructor in Pharmacology.

DELBERT A. GREENWOOD, S.M., Research Associate in Pharmacology.

FREMONT ELLIS KELSEY, PH.D., Research Associate in Pharmacology.

AUSTIN EDWARD SMITH, M.D., C.M., Research Associate in Pharmacology.

GRAHAM MIEN CHEN, SC.D., M.D., Research Associate in Pharmacology and Lederle Laboratories Fellow.

HOYLANDE DENUNE YOUNG, PH.D., Research Associate in Pharmacology.

FRANCES KATHLEEN OLDHAM, PH.D., Instructor in Pharmacology and John J. Abel Fellow.

CLIO ERNST REDEMANN, PH.D., Research Associate in Pharmacology.

EARL HAMILTON DEARBORN, PH.D., Instructor in Pharmacology.

GEORGE JULIAN ROTARIU, S.M., Research Assistant in Pharmacology.

HOWARD GEORGE GLASS, PH.D., Research Assistant in Pharmacology.

SIMON BLACK, PH.D., Research Assistant in Pharmacology.

ROBERT STEPHEN MERRILL, Research Assistant in Pharmacology.

LAWRENCE SIDNEY SONKIN, S.M., Research Assistant in Pharmacology.

RALPH BURTON FEARING, S.M., Research Assistant in Pharmacology.

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JOSEPH HARDY CHIVERS, S.B., M.D., Professorial Lecturer in Forensic Medicine.

HENRY CLARIS SWEANY, M.D., Professorial Lecturer in Forensic Medicine.

SAMUEL A. LEVINSON, M.D., Professorial Lecturer in Forensic Medicine.

CLARENCE W. MUEHLBERGER, PH.D., Professorial Lecturer in Forensic Medicine.

JOSEPH WILLIAM HOLLOWAY, L.B., Lecturer in Medical Jurisprudence.

### FELLOW, 1942-43

H. VIRGINIA GILLILAND, S.M.

### INTRODUCTORY

The Department offers courses in pharmacology and toxicology to: (1) medical students, (2) graduate students in the physical and biological sciences, and (3) properly qualified students who wish to pursue advanced work in preparation for either a research or an academic career in this field.

Students who desire to specialize in this Department are strongly advised to obtain a broad scientific foundation, including work in the cognate sciences. The following courses are suggested as aids to the attainment of this objective: Physics 105, 106, and 107; Mathematics, including calculus; Chemistry 104, 105, 120, 130, 240, 261; Physiology 202, 203, 304; Biochemistry 201, 202; Zoölogy 101; Botany 101, 202; comparative anatomy of vertebrates; histology; bacteriology; and pathology. It is advisable that the student have a reading knowledge of French and German.

### THE DEGREE OF BACHELOR OF SCIENCE\*

On admission to the Division, each student specializing in the Department arranges with the aid of the Departmental Counselor a program of approximately 12 courses to be taken in the Department and related departments, in addition to elective work completed in the College.

### HIGHER DEGREES

The Divisional requirements for higher degrees are outlined on pages 66-67 of the *Announcements of the College and the Divisions*.

### MASTER OF SCIENCE

*The Departmental degree.*—Departmental prerequisites: Admission to the Division, a satisfactory dissertation, and three quarters of advanced work in the Department and related departments are required, together with a working knowledge of German and French and a final Departmental examination.

*The Divisional degree.*—The Divisional degree will be given in only rare cases, and in such instances the Divisional requirements (pp. 66-67 of the *Announcements of the College and the Divisions*) will be followed.

### DOCTOR OF PHILOSOPHY

*Departmental prerequisite.*—(1) A comprehensive knowledge of the history and literature of pharmacology and toxicology; (2) a satisfactory knowledge of physiology, biochemistry, histology, and pathology, or preferably the completion of the first two years of Medicine; and (3) the completion of original research work. Candidates must take part in the seminars. Before he is accepted as a candidate, the student is required to pass a preliminary examination, the scope of which is covered by Chemistry 120, 221, 230, 240, 261; Biochemistry 201, 202; Physiology 251, 252, 303; Anatomy 305; Pathology 301, 302; and Pharmacology 201, 301, 310, 352, 401. This preliminary examination should be taken as early as possible and may not be taken later than eight months before the degree is to be conferred.

### DOCTOR OF MEDICINE

The requirements for the degree of Doctor of Medicine are listed in the *Announcements of the School of Medicine*. They include Course 301 and a satisfactory final examination.

Candidates for the degree of Doctor of Medicine *with honors* in Pharmacology must have (1) maintained a better than average grade for the four years of the medical curriculum and (2) done advanced work in excess of the above-stated minimum requirements during at least three quarters, leading to the preparation of an acceptable thesis based on independent research approved by the Department of Pharmacology. It is expected that the candidate will attend the Departmental seminars.

### COURSES OF INSTRUCTION

Courses marked \* require payment of a laboratory fee by all except medical students.

**201. Toxicology.**—A lecture course in which important organic and inorganic poisons, the methods used in detecting the commoner poisons and the lesions produced by them, are discussed. Lecture outline obtainable at the University Bookstore. Students intending to take Pharm 301 are expected to be familiar with the contents of Pharm 201. Prereq: Biochem 201. A knowledge of histology and pathology is desirable.  $\frac{1}{2}$ C. Sum, W, F, 8; Spr, Tu, Th, 1; GEILING AND STAFF.

**\*301. Pharmacology.**—The physiological analysis and interpretation of the mode of action of the more important drugs. Attention is paid to prescription-writing and to the preparations listed in the *U.S. Pharmacopoeia*, the *National Formulary*, and *New and Nonofficial Remedies*. Prereq: Pharm 201 preferred; Biochem 201, 202; Physiol 251, 252,

\* See pp. 65-66 of the *Announcements of the College and the Divisions*.

and 303. A knowledge of histology and pathology is also desirable. C. Aut: lect, M, 9-11; W, F, 9-10; lab, *sec a*, W, 1-5; *sec b*, F, 12-4; GEILING AND STAFF.

**302. Pharmacology for Chemists.**—[Not given 1943-44.]

**\*352. Advanced Pharmacology and Toxicology.**—Conferences and advanced laboratory work on selected topics, such as bio-assay, and other quantitative methods. Open to a limited number of qualified students. Prereq: Pharm 301. C-2Cs. Sum, Aut, Win, Spr, hrs to be arranged, GEILING, COON, KELSEY.

**\*401. Research in Pharmacology.**—A course open to a limited number of qualified students and graduates in medicine. Each qr, hrs to be arranged for each student, GEILING, COON, KELSEY.

**410. Seminar in Pharmacology.**—A joint seminar with the departments of Physiology and Biochemistry for the presentation of research reports. One hr wkly, each qr, STAFF MEMBERS.

#### RELATED COURSE

**Forensic Medicine and Medical Jurisprudence** (included in Conjoint Clinical Course 350).—See page 26.

## THE DEPARTMENT OF PHYSIOLOGY

### OFFICERS OF INSTRUCTION

ARNO BENEDICT LUCKHARDT, PH.D., M.D., Sc.D., Chairman of the Administrative Committee of the Department of Physiology and Professor of Physiology.

NATHANIEL KLEITMAN, PH.D., Secretary of the Department and Associate Professor of Physiology.

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FRANKLIN CHAMBERS MCLEAN, PH.D., M.D., Professor of Pathological Physiology (on leave for military service).

RALPH WALDO GERARD, PH.D., M.D., Professor of Physiology and Graduate Student Counselor.

VICTOR JOHNSON, PH.D., M.D., Associate Professor of Physiology and Undergraduate Student Counselor (on leave of absence).

F. JOSEPH MULLIN, PH.D., Assistant Professor of Physiology.

JOHN OLIVER HUTCHENS, PH.D., Instructor in Physiology.

JULIAN MORRIS TOBIAS, S.B., M.D., Instructor in Physiology.

MORRIS A. LIPTON, PH.D., Instructor in Physiology.

JOAN LONGINI, PH.D., Research Assistant in Physiology.

ESTHER DA COSTA HOELZEL, PH.D., Research Assistant in Physiology.

JOHN R. RUSSELL, S.B., Research Assistant and Assistant in Physiology.

LOUIS E. MOSES, A.B., Assistant in Physiology.

BARBARA KINYON, A.B., Assistant in Physiology.

JULIA MEYER, S.B., Assistant in Physiology.

DAVID L. RUBINFINE, S.B., Assistant in Physiology.

GEORGE B. WHATMORE, S.M., Assistant in Physiology.

HAIGHT WENTWORTH GURNEY, S.B., Research Assistant in Physiology.

FREDERICK HOELZEL, Assistant in Physiology.

HARVEY M. PATT, PH.D., Research Assistant in Physiology.

SHOLEM POSTEL, Research Assistant in Physiology.

FRIEDA PANIMON SIMON, PH.D., Research Assistant in Physiology.

MARGUERITE NETTLETON SWIFT, S.M., Research Assistant in Physiology.

ELIZABETH WALLERSTEIN, S.B., Research Assistant in Physiology.

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HEINRICH NECHELES, M.D., PH.D., Professorial Lecturer in Physiology.

LOUIS NELSON KATZ, A.M., M.D., Professorial Lecturer in Physiology.

SAMUEL SOSKIN, M.D., PH.D., Professorial Lecturer in Physiology.

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ANTON JULIUS CARLSON, PH.D., M.D., LL.D., Sc.D., Frank P. Hixon Distinguished Service Professor Emeritus of Physiology.

RALPH STAYNER LILLIE, PH.D., Professor Emeritus of Physiology.

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### FELLOW, 1942-43

BETSY PLATT WEINER, A.B., Rawson Fellow.

## MATHEMATICAL BIOPHYSICS

NICOLAS RASHEVSKY, PH.D., Associate Professor of Mathematical Biophysics.

ALSTON SCOTT HOUSEHOLDER, PH.D., Assistant Professor of Mathematical Biophysics.

HERBERT D. LANDAHL, PH.D., Research Associate in Mathematical Biophysics.



## INTRODUCTORY

The courses in the Department of Physiology are arranged for four classes of students:

1. Students in the College and Divisions who desire some knowledge of human physiology, foods, and personal hygiene as an educational equipment for life.
2. Students in the Divisions who wish to acquire a more extensive knowledge of the structure and functions of the human body, or who wish to study biology from the physiological side. To satisfy the needs of these students and enable them to cover the subject satisfactorily, a two-course sequence is given: Physiology 202 and 203.
3. Students wishing to specialize in physiology, or students of other biological sciences who wish to take minor work in advanced physiology.
4. Medical students.

## ADMISSION TO THE DEPARTMENT

Students are admitted to the Department who have previous training in general inorganic and elementary organic chemistry (Chemistry 104, 105, 120, or equivalents), and who also satisfy the general requirements for admission to the Division.

## THE PREPARATION OF TEACHERS

Students who are preparing to teach physiology in secondary schools or junior colleges should refer to the general statements on pages 70-71 of the *Announcements of the College and the Divisions*, secure copies of the *Announcements* entitled *The Preparation of Teachers*, and consult the Counselor, Dr. Johnson.

## THE DEGREE OF BACHELOR OF SCIENCE\*

On admission to the Division, each student specializing in the Department arranges in consultation with the Departmental Counselor a progressive, sequential program of approximately 12 courses in the Department or in the Department and related departments, in addition to those completed in the College.

The required courses in the Department are Physiology 101 or 202 and 203, 251, 252, and 303. With the approval of the Counselor, courses may be selected from the following: Physics 105, 106, 107; Psychology 201; Chemistry 240, 261; Biochemistry 201, 202; Anatomy 306 or 316; Zoölogy 205, 220, 301, 320; Bacteriology 201.

## HIGHER DEGREES

The Divisional requirements for higher degrees are set forth on pages 66-67 of the *Announcements of the College and the Divisions*.

## MASTER OF SCIENCE

*The Departmental degree.*—Departmental prerequisites: (1) Research, at least 3 courses (Physiology 411); (2) 2-5 courses from the courses numbered 300 or higher in physiology and related sciences (Physiology 251, 252, and 303 may be counted in these 5 courses); and (3) thesis.

*The Divisional degree.*—Departmental prerequisites: A scholastic achievement in physiology equivalent to Courses 251, 252, and 303. For general requirements see Divisional announcement concerning this degree (pp. 66-67 of the *Announcements of the College and the Divisions*).

## DOCTOR OF PHILOSOPHY

*Departmental prerequisites.*—Physiology 251, 252, and 303, and Biochemistry 201 and 202, or their equivalent, and 2-4 additional courses in the 300-400 group in physiology and

\* See pp. 65-66 of the *Announcements of the College and the Divisions*.

biochemistry are required of all candidates for the Doctor's degree. The candidate must also participate in the weekly seminar in the Physiology group. The further selection of work is arranged in each case by consultation. The student must pass a qualifying examination in the general field of physiology before the Departmental recommendation for the candidacy is granted.

### DOCTOR OF MEDICINE

The course requirements in physiology for the degree of Doctor of Medicine are listed in the *Announcements of the School of Medicine*. They include Courses 251, 252, and 303.

A candidate for the degree of Doctor of Medicine who elects to do research leading to a thesis in the Department of Physiology is guided in the selection and experimental development of his research problem.

## COURSES OF INSTRUCTION

Courses marked \* require payment of a laboratory fee by all except medical students.

### COURSE IN THE COLLEGE

\*101. *Physiology*.—See page 55 of the *Announcements of the College and the Divisions*.

### COURSES IN THE DIVISION

Physiology 202 and 203 are intended for students who wish to secure a more detailed and comprehensive knowledge of physiology. These courses prepare the student for advanced work in physiology and are useful to students who intend to specialize in other branches of biology. Physiology 202 is particularly helpful to students in home economics.

\*202. *Physiology of Circulation, Respiration, Digestion, Metabolism, and Nutrition*.—Prereq: Elementary physics and chemistry. Aut: lect, M, W, F, 1; lab, M, W, 2-4; KLEITMAN AND ASSISTANT.

\*205. *Introduction to Research*.—Prereq: Physiol 202, 203, or their equiv, and consent of instructor. Each qr, hrs to be arranged, STAFF.

\*251. *Physiology of Blood, Circulation, and Respiration*.—Lectures and recitations, 4 hours a week; laboratory work, 4 hours a week. Prereq: Physiol 202 or equiv. Sum: lect, M, W, 9-11; lab, *sec a*, F, 8-12; *sec b*, F, 1-5; Spr: lect, W, F, 9-11; lab, *sec a*, M, 8-12; *sec b*, M, 1-5; MULLIN.

\*252. *Physiology of Digestion, Absorption, Secretion, Excretion, Endocrine Glands, and Heat*.—Lectures and recitation, 4 hours a week; laboratory, 4 hours a week. Prereq: Biochem 201, Physiol 251. Aut: lect, W, F, 9-11; lab, *sec a*, M, 8-12; *sec b*, M, 1-5; LUCKHARDT.

\*303. *Physiology of the Nervous System and the Senses*.—Lectures, two a week; recitation and conference, one a week; laboratory, 4 hours a week. Prereq: Anat 306, Physiol 251. Sum: lect, W, 11-1; F, 9-11; lab, *sec a*, M, 8-12; *sec b*, M, 1-5; Win: lect, W, F, 9-11; lab, *sec a*, M, 8-12; *sec b*, M, 1-5; GERARD, KLEITMAN.

\*305. *The Principles of Physiology*.—The application of the principles of physiology to the clinical examination of the central nervous system and special senses. Laboratory work limited to 10 students; registration for laboratory by conference with instructor.  $\frac{1}{2}$ C-C. Spr, hrs to be arranged, LUCKHARDT.

308. *Applied Physiology of the Circulation*.—Mechanics of the circulation; the electrocardiogram; sphygmography; sphygmomanometry; pathological physiology of the heart and blood vessels. One phase of the subject considered each quarter. Lectures and conferences, 2 hours a week. Prereq: Physiol 251.  $\frac{1}{2}$ C. Aut, hrs to be arranged, KATZ.

309. *Pathological Physiology of the Gastrointestinal Tract*.—Lectures and conferences, 2 hours a week. Prereq: Physiol 252.  $\frac{1}{2}$ C. Spr, hrs to be arranged, NECHELES.

310. *Intermediary Metabolism in Health and Disease*.—Lectures and conferences, 2 hours a week. Prereq: Physiol 252.  $\frac{1}{2}$ C. Win, hrs to be arranged, SOSKIN.

409. *Seminar in Physiology Group*.—No credit. Sum, 1st Term, M, 4.

\*411. *Research in Physiology*.—Prereq: Consent of Department. C-3Cs each qr. Hrs to be arranged, LUCKHARDT, McLEAN, GERARD, KLEITMAN, MULLIN, HUTCHENS, TOBIAS.

## COURSES NOT OFFERED IN 1943-44

\*203. Physiology of Muscle, Nervous System, Special Senses, Internal Secretions, and Reproduction.

\*304. Special Physiology of Mammals.

306. Mineral Metabolism.

312. Physiology of the Nervous System, Chronaxie, Conditioned Reflexes, Sleep.

\*403, 404. General Physiology.

406. The Neurone.

407. Special Physiology of the Glands of Internal Secretion.

## MATHEMATICAL BIOPHYSICS

The degree of Doctor of Philosophy in Mathematical Biophysics is given through the Faculty of the Division of the Biological Sciences. The program of study is made in consultation with the Chairman of the Committee on Mathematical Biophysics and the Chairman of the Department of Physiology. About four years, covering approximately 36 courses, including research courses, are necessary after the completion of the requirements for the Bachelor's degree.\* For persons holding a Master's degree in either Physics or Mathematics, a special program of study is arranged in each case.

## COURSES OF INSTRUCTION

347. **Mathematical Biophysics I.**—Physicomathematical aspects of cell growth and multiplication. Physicomathematical theory of organic form. Prereq: General physics; calculus; differential equations, ordinary and partial; general biology. Lectures and seminar. C. Aut, W, 3:30-5:30, RASHEVSKY, HOUSEHOLDER, LANDAHL.

348. **Mathematical Biophysics II.**—Physicomathematical aspects of nerve excitation and nerve conduction. Prereq: General physics; calculus; differential equations, ordinary and partial; general biology. Lectures and seminar. C. Win, W, 3:30-5:30, RASHEVSKY, HOUSEHOLDER, LANDAHL.

349. **Mathematical Biophysics III.**—Hysteresis phenomena in physics and biology. Application to learning. Physicomathematical aspects of the functions of the central nervous system and of behavior. Physicomathematical aspects of the *Gestalt* problem. Applications to the mathematical theory of aesthetic values and of social phenomena. Prereq: General physics; calculus; differential equations, ordinary and partial; general biology. Lectures and seminar. C. Spr, W, 3:30-5:30; RASHEVSKY, HOUSEHOLDER, LANDAHL.

370. **Seminar in Mathematical Biophysics.**—A critical and comparative survey of physical and mathematical theories in the field of biology and reports on current research. Prereq: Consent of instructor.  $\frac{1}{2}$ C. Aut, Win, Spr, F, 4:30, RASHEVSKY, HOUSEHOLDER.

420. **Research in Mathematical Biophysics.**—Each qr. RASHEVSKY, HOUSEHOLDER, LANDAHL.

\* See pp. 65-66 of the *Announcements of the College and the Divisions*.

## THE DEPARTMENT OF PSYCHOLOGY

For announcements of courses in psychology see the Division of the Social Sciences.

Students who have already begun their work in candidacy for a degree in the Division of the Biological Sciences may continue in accordance with the program previously approved for the individual student.

Students may be admitted to the Division of the Biological Sciences with the expectation of taking a degree of Bachelor of Science (see below) or Divisional Master of Science in Psychology, if they have completed the requirements for admission and are individually recommended by the Department of Psychology.

### ADMISSION TO THE DIVISION

The requirements for admission to the Division of the Biological Sciences are stated on page 65 of the *Announcements of the College and the Divisions*. As a substitute for the Divisional requirement of the second-year College work in biology ("B-Z-P" sequence), the student may, if he desires, offer 3 courses in the biological sciences, of which 1 shall be in physiology and 1 in zoölogy.

### THE DEGREE OF BACHELOR OF SCIENCE\*

Psychology 201 is prerequisite to all other courses in the Department, and should be taken at the earliest opportunity. It is open to fourth-year College students. In addition to the Divisional requirements for the Bachelor's degree the candidate must meet the following Departmental requirements:

1. 6 courses in the Department, including 211, 251, 256, and 361, and 2 of the following: Psychology 302, 320, 341; Education 312 or Home Economics 237; Anatomy 316; Zoölogy 305.

2. 6 related courses, approved in advance by the Departmental Counselor, of which 4 shall be in the biological or the physical sciences, including at least 1 in each Division, and at least 1 involving laboratory training; 1 in the social sciences or in philosophy; and 1 additional course.

3. 6 electives of which 1 may be Psychology 201.

### THE DEGREE OF MASTER OF SCIENCE

*The Departmental degree.*—The Departmental degree of Master of Science in Psychology is not given in the Division of the Biological Sciences.

*The Divisional degree.*—The student must follow a program approved by the Secretary of the Department of Psychology and the Dean of Students in the Division of the Biological Sciences.

\* See pages 65–66 of the *Announcements of the College and the Divisions*.



## THE OTHO S. A. SPRAGUE MEMORIAL INSTITUTE

### PSYCHIATRIC RESEARCH

The Otho S. A. Sprague Memorial Institute supports research in psychiatry, conducted on a co-operative basis in several departments of the University in association with the division of psychiatry of the Department of Medicine. The close geographic and working association of medical and fundamental sciences gives exceptional advantages for the study of psychiatric problems, which ramify so widely into many special fields. The scope of the present activities is indicated by the different departments represented by the staff members as listed below.

The Otho S. A. Sprague Memorial Institute Fund is administered through the Dean of the Division of the Biological Sciences, with the aid of the following advisory committee.

WILLIAM HAY TALIAFERRO, Dean of the Division of Biological Sciences, *Chairman*.

ARTHUR CHARLES BACHMEYER, Director of University Clinics, and Associate Dean of the Division of Biological Sciences.

DAVID SLIGHT, Professor of Psychiatry.

### MEMBERS OF THE STAFF OF THE OTHO S. A. SPRAGUE MEMORIAL INSTITUTE

#### IN THE DEPARTMENT OF ANATOMY

DAVID BARRETT CLARK, Ph.D., Research Assistant in Neuroanatomy.

#### IN THE DEPARTMENT OF PATHOLOGY

JULIAN HERMAN LEWIS, Ph.D., M.D., Associate Professor of Pathology.

#### IN THE DIVISION OF PSYCHIATRY IN THE DEPARTMENT OF MEDICINE

THEODORE JOHNSTON CASE, S.B., M.D., Assistant Professor of Neurophysiology.

WARD CAMPBELL HALSTEAD, Ph.D., Assistant Professor of Experimental Psychology.

EVA RUTH BALKEN, Ph.D., Assistant Professor of Psychology.

#### IN THE DEPARTMENT OF PSYCHOLOGY

HEINRICH KLÜVER, Ph.D., Professor of Experimental Psychology.

**MEMBERS OF THE STAFF OF THE DIVISION AFFILIATED  
WITH THE SPRAGUE INSTITUTE AND CO-OPERATING  
IN ITS RESEARCH PROGRAM**

**IN THE DEPARTMENT OF ANATOMY**

STEPHEN POLYAK, M.D., Professor of Anatomy.

**IN THE DIVISION OF PSYCHIATRY IN THE DEPARTMENT  
OF MEDICINE**

DAVID SLIGHT, M.B., CH.B., D.P.M., F.R.C.P. (C), Professor of Psychiatry.

HUGH THOMPSON CARMICHAEL, M.D., C.M., S.M., Assistant Professor of Psychiatry.

JULES HYMAN MASSERMAN, M.D., Assistant Professor of Psychiatry.

HENRY WALTER BROSN, A.B., M.D., Assistant Professor of Psychiatry (on leave for military service).

ADRIAN HOLD VANDER VEER, A.B., M.D., Assistant Professor of Psychiatry.

CHARLOTTE GERTRUDE BABCOCK, M.D., Instructor in Psychiatry.

JAY EARL MCCORMICK, JR., S.B., M.D., Instructor and Resident in Psychiatry.

**IN THE DEPARTMENT OF MEDICINE**

SEYMOUR J. GRAY, A.B., M.D., Instructor in Medicine.

**IN THE DEPARTMENT OF SURGERY**

ARTHUR EARL WALKER, A.B., M.D., Associate Professor of Neurosurgery.

JACK I. WOOLF, M.D., Instructor and Resident in Neurosurgery.

**THE DEPARTMENT OF SURGERY****OFFICERS OF INSTRUCTION**

DALLAS B. PHEMISTER, M.D., Chairman of the Department of Surgery and Thomas D. Jones Professor of Surgery.

ALEXANDER BRUNSCHWIG, S.M., M.D., Secretary of the Department and Professor of Surgery.

**GENERAL SURGERY**

LESTER REYNOLD DRAGSTEDT, Ph.D., M.D., Professor of Surgery.

HILGER PERRY JENKINS, S.B., M.D., Associate Professor of Surgery.

WILLIAM ELIAS ADAMS, S.B., M.D., Associate Professor of Surgery.

DWIGHT EDWIN CLARK, A.M., M.D., Instructor in Surgery.

J. GARROTT ALLEN, A.B., M.D., Instructor in Surgery, Douglas Smith Foundation.

FREDERICK MITCHUM OWENS, JR., A.B., M.D., Instructor in Surgery, Douglas Smith Foundation (on leave for military service).

PAUL WILLIAM SCHAFER, A.B., M.D., Instructor in Surgery, Douglas Smith Foundation.

THOMAS FRANCIS THORNTON, A.B., M.D., Research Assistant in Surgery, Douglas Smith Foundation.

LUCIA JORDAN DUNHAM, A.B., M.D., Research Assistant in Surgery, Swift and Company Fellowship.

NANCY M. CORBIN, A.M., Research Assistant in Surgery.

**NEUROSURGERY**

ARTHUR EARL WALKER, A.B., M.D., Associate Professor of Surgery.

JACK I. WOOLF, M.D., Instructor in Surgery.

JERRY JOHN KOLLROS, Ph.D., Research Assistant in Surgery.

**OPHTHALMOLOGY**

ARLINGTON COLTON KRAUSE, Ph.D., M.D., Associate Professor of Surgery.

JEROME A. GANS, A.B., M.D., Instructor in Surgery (on leave for military service).

WILLIAM M. JONES, A.B., M.D., Clinical Assistant in Surgery.

WILLIAM ROSENBERG, S.B., M.D., Instructor in Surgery.

MAURICE I. DRELL, S.B., M.D., Assistant and Assistant Resident in Surgery.

G. HENRY MUNDT, JR., A.B., M.D., Assistant in Surgery.

BARBARA SPIRO, M.D., Assistant and Assistant Resident in Surgery.

JAMES MARK RICHARDSON, JR., M.D., Research Assistant in Surgery.

NORMAN NATHAN TEPPER, M.D., Assistant and Assistant Resident in Surgery.

**ORTHOPEDIC SURGERY**

CLY HOWARD HATCHER, M.D., Associate Professor of Surgery.

ROBERT DUNHAM MOORE, A.B., M.D., Instructor and Resident in Surgery.

MARY S. SHERMAN, A.M., M.D., Assistant and Assistant Resident in Surgery.

**OTOLARYNGOLOGY**

JOHN RALSTON LINDSAY, M.D., Professor of Surgery.

HENRY B. PERLMAN, S.B., M.D., Assistant Professor of Surgery.

DELBERT K. JUDD, S.B., M.D., Assistant Professor of Surgery.

HEINRICH FRANZ KOBRACK, M.D., PH.D., Research Associate in Surgery, Douglas Smith Foundation (on leave for military service).

LEO M. MORSE, S.B., M.D., Instructor in Surgery.

NATHAN STEINBERG, A.B., M.D., Assistant in Surgery.

JOSEPH WEPMAN, A.M., Assistant in Surgery.

### UROLOGY

CHARLES BRENTON HUGGINS, A.B., M.D., Professor of Surgery.

CORNELIUS WILLIAM VERMEULEN, A.B., M.D., Instructor in Surgery (on leave for military service).

WILLIAM WALLACE SCOTT, PH.D., M.D., Instructor in Surgery.

### ANESTHESIA

HUBERTA LIVINGSTONE, S.B., M.D., Assistant Professor of Surgery.

ROSE ENGEL, M.D., Assistant Professor of Surgery.

RUTH CAMPBELL MARTIN, M.D., Assistant and Assistant Resident in Surgery.

FENJA REISS, M.D., Assistant and Assistant Resident in Surgery.

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MARGARET CAMPBELL WINTERS, R.M., Instructor in Surgery (Physiotherapy).

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EDWARD VAIL LAPHAM BROWN, M.D., Professor Emeritus of Surgery (Ophthalmology).

### INTRODUCTORY

The instruction is given in the form of an introductory course, an externship in the hospital, clerkships in the out-patient department, amphitheater clinics, and advanced work in the special fields of general surgery and in the surgical specialties. Opportunities are offered qualified students for research work, and a limited number of internships, assistant residencies, and residencies are available in general surgery and in the surgical specialties.

### DEGREES

#### DOCTOR OF MEDICINE

All candidates for the degree of Doctor of Medicine are required to complete a minimum of 5 courses in general surgery and the surgical specialties and to pass a general examination in general surgery, urology, orthopedics, otolaryngology, and ophthalmology. Examinations are offered during the second half of each quarter. Candidates for the M.D. degree *with honors* in Surgery must have maintained a better than average grade for the four years of the medical curriculum, and are required in addition to prepare a satisfactory thesis based on research and to pass a satisfactory examination in Surgery.

#### THE DEGREE OF MASTER OF SCIENCE

The Degree of Master of Science is granted in the Department of Surgery upon the fulfillment of the following requirements: residence for at least three quarters subsequent to the granting of the degree of Doctor of Medicine; 8 courses of satisfactory grade level, 6 of which shall have been done in the University of Chicago; a satisfactory dissertation approved by the Chairman of the Department; and a satisfactory examination in some special field of surgery. Work as an undergraduate extern or intern or as resident is not counted toward the degree of Master of Science. Candidates who have active clinical responsibilities, such as residents, are not permitted to register for more than one course a quarter toward this degree.

The Divisional Master's degree is not granted in this Department.



## DOCTOR OF PHILOSOPHY

The degree of Doctor of Philosophy in Surgery is recommended only for students who have completed the work required for the degree of Doctor of Medicine, who have submitted a thesis embodying original research approved by the Department of Surgery, and who have completed satisfactorily an amount of advanced work equivalent to that required for the degree of Doctor of Philosophy in the Division of the Biological Sciences.

## FELLOWSHIPS

Fellowships from the Douglas Smith Foundation may be awarded to properly qualified candidates for research work in the Department of Surgery.

## COURSES OF INSTRUCTION

## I. GENERAL SURGERY, ORTHOPEDICS, AND UROLOGY

Conjoint Clinical Course 301. Introductory Course.—See page 26.

Conjoint Clinical Course 302.—See page 26.

303. **Externship in Hospital.**—The student works full time for one quarter with resident and attending staffs and shares responsibility for the care of patients and for the investigation of disease. Morning: Ward rounds, assisting at operations, administration of anesthetics, and history-taking. 12-1: Conjoint clinical lectures. Afternoon: Surgical pathology, history-taking, laboratory work, and assisting at dressings. Includes half-course credit in therapeutics. Prereq: Path 302. 3Cs each qr. ADAMS, BRUNSCHWIG, DRAGSTEDT, HATCHER, HUGGINS, JENKINS, PHEMISTER, WALKER.

304. **Externship in Out-Patient Department in General Surgery, Orthopedics, and Genito-urinary Surgery.**—Required course. Under supervision the student participates in the diagnosis and treatment of conditions presented by ambulatory patients, and may visit out-patients who have been hospitalized. Includes Conjoint Clinical Course 350. Prereq: Surg 303 or Med 303 or Obs and Ped 303.  $\frac{1}{2}$ C-1 $\frac{1}{2}$ Cs each qr. *Group A*, M, W, F, 2-4:30; *Group B*, Tu, 2-4:30, and S, 10-12.

307. **Ward Visits with Externs.**—Prereq: Consent of instructor.  $\frac{1}{2}$ C. Aut, Win, Spr, M, W, F, 8-9; Tu, Th, S, 9-10; PHEMISTER AND STAFF.

325. **Internship in Surgery.**—Elective for selected Seniors after consultation with and approval by the Chairman of the Department and the Dean of Students. 3Cs. STAFF.

Conjoint Clinical Course 350.—See page 26.

351. **Surgical Anatomy and Operative Surgery.**—Prereq: Surg 303.  $\frac{1}{2}$ C. Aut, Spr, two periods wkly: W and F, 4:45-6:15, ADAMS.

352. **Advanced Work in Surgical Pathology of Bone.**—Limited to Seniors. Hrs to be arranged, HATCHER, MOORE.

353. **Clinical Anesthesia.**—Prereq: Surg 303.  $\frac{1}{2}$ C each qr. Sum, Aut, Win, Spr, hrs to be arranged (1 day a week, 3 hrs), LIVINGSTONE.

357. **Advanced Work in Surgical Pathology.**—Limited to Seniors. Hrs to be arranged, BRUNSCHWIG.

402. **Research in Surgery.**—C-3Cs each qr. ADAMS, BRUNSCHWIG, HATCHER, DRAGSTEDT, HUGGINS, JENKINS, PHEMISTER.

411. **Seminar and Surgical Pathological Conference.**—No credit. Wkly.

Orthopedic Conference.—No credit. M, 7 P.M.

## II. OPHTHALMOLOGY

311. **Clinical Ophthalmology.**—A combined external-disease and ophthalmoscopic course given in the dispensary, wards, and operating rooms, including training in the use of instruments, in history-writing, and in description of external and fundus diseases.  $\frac{3}{4}$ C. Each qr, 6 weeks. Lab, 5-15 hrs wkly. M-F, 9-12, KRAUSE AND STAFF.

312. **Anatomy and Pathology.**—Includes histology, gross anatomy, and pathology.  $\frac{1}{2}$ C. Aut, Win, Spr, Tu, 4-6, KRAUSE.

403. **Research in Ophthalmology.**—KRAUSE.

### III. OTOLARYNGOLOGY

**321. Clinical Otolaryngology.**—Students participate in history-taking and in examination and care of patients in the out-patient clinic. Includes training in examination techniques, X-ray interpretation, functional tests, and principles of therapy. Anatomical and histopathological demonstrations are given in the laboratory.  $\frac{3}{4}$ C. Each qr. Lect, F, 10:30–12 (12 weeks); clinics, M–Th, 9–12 (6 weeks); LINDSAY AND STAFF.

**322. Advanced Work.**—Maximum of 4 days wkly. Up to 6 courses.

**323. Abnormalities of Voice and Speech.**—A lecture, demonstration, and discussion course covering the differential diagnosis and demonstration of speech cases plus discussion of techniques in therapy. Open to medical students and a limited number of students in education or psychology. C.  $2\frac{1}{2}$  hrs wkly. Hrs to be arranged, WEPMAN.

**404. Research in Otolaryngology.**—C–3Cs. LINDSAY.

### IV. NEUROSURGERY

**Conjoint Clinical Course 302.**—See page 26.

**Conjoint Clinical Course 350.**—See page 26.

**303. Externship in Hospital.**—Neurosurgical cases assigned to students in rotation. Each qr. Rounds, M, 8–9, WALKER.

**331. Externship in Out-Patient Department.**—Limited to 4 students. Prereq:  $2\frac{1}{4}$ Cs of Surg 303 or the equiv. Aut, Win, Spr, M, W, F, WALKER.

**416. Research in Diseases of the Nervous System.**—Open to qualified students by arrangement. C–3Cs. Aut, Win, Spr, WALKER.

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## DEPARTMENT OF ZOÖLOGY

### OFFICERS OF INSTRUCTION

CARL RICHARD MOORE, PH.D., Chairman of the Department of Zoölogy and Professor of Zoölogy.

THOMAS PARK, PH.D., Secretary of the Department and Associate Professor of Zoölogy.

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WARDER CLYDE ALLEE, PH.D., LL.D., Professor of Zoölogy.

SEWALL WRIGHT, SC.D., Ernest D. Burton Distinguished Service Professor of Zoölogy.

ALFRED EDWARDS EMERSON, PH.D., Professor of Zoölogy and Student Counselor.

PAUL ALFRED WEISS, PH.D., Professor of Zoölogy.

LINCOLN VALENTINE DOMM, PH.D., Research Associate in Zoölogy.

GRAHAM PHILLIPS DUSHANE, PH.D., Assistant Professor of Zoölogy.

RALPH MORRIS BUCHSBAUM, PH.D., Assistant Professor of Zoölogy in the College (on leave for military service).

HERLUF HALDAN STRANDSKOV, PH.D., Assistant Professor of Zoölogy.

DOROTHY PRICE, PH.D., Research Associate in Zoölogy.

HSI WANG, PH.D., Research Assistant in Zoölogy.

ELIZABETH ANN BEEMAN, A.M., Research Assistant in Zoölogy.

A. CECIL TAYLOR, PH.D., Research Assistant in Zoölogy.

JEAN BRUCE CUMMINGS, S.M., Research Assistant in Zoölogy.

AGNES SANXAY BURT, A.M., Assistant in Zoölogy.

CATHARINE LUTHERMAN KOLLROS, S.B., Assistant in Zoölogy.

LA MONT COLE, S.M., Assistant in Zoölogy.

DAVID RUBIN, S.B., Assistant in Zoölogy.

ELSIE TABER, A.M., Assistant in Zoölogy.

BENSON EARL GINSBURG, PH.D., Assistant in Zoölogy in the College.

JERRY JOHN KOLLROS, PH.D., Assistant in Zoölogy.

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KARL PATTERSON SCHMIDT, Lecturer in Zoölogy.

GEORGE FINLAY SIMMONS, PH.D., Visiting Assistant Professor of Zoölogy (Summer, 1943).

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CHARLES MANNING CHILD, PH.D., SC.D., Professor Emeritus of Zoölogy.

FRANK RATTRAY LILLIE, PH.D., SC.D., LL.D., Andrew MacLeish Distinguished Service Professor Emeritus of Embryology.

HORATIO HACKETT NEWMAN, PH.D., SC.D., Professor Emeritus of Zoölogy.

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### FELLOWS 1942-43

MIRIAM DOROTHY POSNER, S.B.

RUTH MINERVA MERWIN, A.M.

FRANCES MUSSEY, A.M.

BERNARD GREENBERG, S.M.

EVELINA ORTIZ, S.M.

### INTRODUCTORY

The courses in zoölogy are intended to meet the needs of those students who desire to obtain some knowledge of zoölogy as part of their general education, those who need work in zoölogy to satisfy the requirements of other departments, and those who propose to specialize in zoölogy.

It is advisable that students who propose to *specialize* in zoölogy should obtain a broad scientific foundation, including work in the cognate sciences, and a reading knowledge of

French and German. More specifically, students specializing in zoölogy should have training equivalent to 4 or 5 courses in chemistry, 2 or 3 in physics, and 1 or 2 in geology; they should also obtain knowledge of the general principles of microscopical anatomy, paleontology, botany, and physiology. These courses may be taken concurrently with the work in zoölogy.

### THE DEGREE OF BACHELOR OF SCIENCE\*

Students are admitted to the Department who have previous training in general, inorganic, and elementary organic chemistry (Chemistry 104, 105, 120, or equivalent), and who also satisfy the general requirements for admission to the Division.

Entering students who expect to specialize in zoölogy are advised to prepare during their first year, by formal or informal work, to pass the comprehensive examination based on the general course in biology and to take the biological laboratory sequence (Botany 101, Zoölogy 101, and Physiology 101) during their second year.

Zoölogy 201, 202, 203, and 205 present a comprehensive survey of the animal kingdom. While these courses may be taken in any order, best results are obtained if taken as a sequence in the order indicated.

On admission to the Division, each student specializing in the Department arranges a program in consultation with Professor Emerson, the Departmental Counselor, in accordance with the Divisional practice as follows: one-third of the work in zoölogy, one-third in related departments, and one-third in free electives. (Of this last one-third, not more than one-half may be taken in zoölogy.) The work in zoölogy includes the following fundamental courses: Zoölogy 201, 202, 203, 205, 207, and 220.

### HIGHER DEGREES

The Divisional requirements are stated on pages 66-67 of the *Announcements of the College and the Divisions*. Students proposing to be candidates for the degree of Master of Science or of Doctor of Philosophy in Zoölogy must have basic training equivalent to that required for the Bachelor of Science degree in this Department.

### MASTER OF SCIENCE

*The Departmental degree.*—Departmental prerequisites: 9 additional courses in the Department, or related departments (approved by the Counselor), including a satisfactory thesis based upon original research, and the Departmental examination.

*The Divisional degree.*—Departmental prerequisites: 9 additional courses in the Division, of which not less than 3 must be taken in the Department, and not more than 3 in a single related department (program approved by the Counselor), including a comprehensive essay approved by the immediate supervisor.

### DOCTOR OF PHILOSOPHY

*Departmental prerequisites.*—(1) An examination on the fundamentals of zoölogy before admission to candidacy and (2) 3 or 4 formal courses and 3 or more seminar courses in the Department, depending on previous preparation. The principal emphasis is placed on research, in connection with which all requirements necessary for a scholarly piece of work will be demanded.

There are a number of Faculty members located in other departments of the University who are specialists in phases of zoölogy not actively represented on the departmental staff. By consent of the Department in individual cases, advanced degrees may be taken in Zoölogy with the thesis work done under the direction of certain of these men.

\* See pages 65-66 of the *Announcements of the College and the Divisions*.



## THE PREPARATION OF TEACHERS

Students who are preparing to teach in secondary schools or in junior colleges should refer to the general statements on pages 70-71 of the *Announcements of the College and the Divisions*, secure a copy of the *Announcements* entitled *The Preparation of Teachers*, and consult the Departmental Counselor, Professor Emerson, in arranging their programs.

## THE ZOÖLOGY CLUB

The Zoölogy Club holds open meetings weekly for the presentation of research results and for review and discussion of important new literature.

## COURSES OF INSTRUCTION

Courses marked \* require payment of a laboratory fee by all except medical students.

### COURSE IN THE COLLEGE

\*101. **General Zoölogy.**—See page 55 of the *Announcements of the College and the Divisions*.

### COURSES IN THE DIVISION

\*201. **Invertebrate Zoölogy I.**—A study of lower invertebrate groups: Protozoa, Porifera, Coelenterata, Platyhelminthes, Nematelminthes. Prereq: Zoöl 101 or equiv. Lectures, laboratory work, and demonstrations. Aut: lect and lab, M, W, F, 8-11, ALLEE.

\*202. **Invertebrate Zoölogy II.**—Comparative anatomy, development and phylogeny of the higher invertebrate groups with the exception of Arthropoda. Prereq: Zoöl 101 or equiv. Win: lect and lab, M, W, F, 8-11, WEISS.

\*203. **Invertebrate Zoölogy III.**—Comparative anatomy, development, phylogeny, and physiology of the arthropods. Prereq: Zoöl 101 or equiv. Sum, Spr: lect and lab, M, W, F, 8-11, PARK.

\*205. **Vertebrate Zoölogy.**—Comparative anatomy, development and phylogeny of vertebrates. Prereq: Zoöl 101 or equiv. Sum, Tu, 8-12; Th, S, 8-11; SIMMONS; Win, M, 1-5; W, F, 1-4; DUSHANE; Spr, Tu, 1-5; Th, S, 1-4; STRANDSKOV.

207. **Field Zoölogy.**—An introduction to local animal life based upon classification, distribution, and natural history of the animal phyla of this region. Prereq: Zoöl 101 or equiv. Aut: lect, Tu, Th, 9; field all day Saturday; EMERSON.

211. **Human Genetics** (identical with Sociology 311).—Dealing chiefly with variation and heredity in man. General genetic principles are introduced and are followed by a discussion of the modes of inheritance of normal and pathological traits in man, both physical and mental. Prereq: Biological Sciences 1 and 2, or Biological Sciences 3, or equiv. Sum: 2d hf 1st Term and 1st hf 2d Term: lect, M-S, 10; Aut: lect, Tu, Th, S, 10; STRANDSKOV.

\*220. **Vertebrate Embryology.**—Birds and mammals. Lectures, demonstrations, and laboratory work. Prereq: Zoöl 101 and 205 or equiv. Sum, M, W, 1-5; F, 1; SIMMONS; Aut, Tu, Th, 8-12; S, 8; Spr, M, 1-5; W, 1; F, 1-5; DUSHANE.

303. **Animal Geography.**—A study of the world distribution of animals, together with factors causing and limiting distribution. Lectures, conferences, and assigned topics. Win, Tu, Th, 11-12:30; S, 11; ALLEE.

304. **Animal Ecology.**—The relations between animals and their environment are illustrated: (1) by field and laboratory studies upon the nature and evolution of animal communities, and (2) by a consideration of significant experimental and quantitative results. Prereq: Zoöl 207 or equiv. Spr: Tu, Th, 11-12:30; S, field analyses; ALLEE.

\*305. **Animal Behavior.**—Analysis of animal activities with reference to the physiology and comparative psychology of invertebrates and lower vertebrates. Prereq: 3 courses in zoölogy and 3 in chemistry. Aut: lect, Tu, Th, S, 11; lab as arranged; ALLEE.

\*310. **Fundamental Genetics.**—Discussion of the mechanism of heredity. Laboratory work with *Drosophila melanogaster*. Prereq: Zoöl 101. Aut, M, W, F, 10-12, WRIGHT.

311. **Biometry.**—Frequency distributions, correlation, systems of interrelated variables, tests of the significance of differences. Prereq: Math 104 or equivalent. Spr: lect, M, W, F, 2-3:30, WRIGHT.

**312. Physiological Genetics.**—Discussion of the problem of the control of life-processes by genes. Prereq: Zoöl 310. Win: lect, M, W, F, 2-3:30, WRIGHT.

**313. Evolution.**—On the nature of the evolutionary process, the factors of evolution, and the possibilities of control. These problems are related to the theory of genetics of populations. Prereq: Zoöl 310 or Bot 250, or equiv. Sum: lect, M, W, F, 2-3:30, WRIGHT.

**\*315. Histogenesis.**—A comparative and experimental study of organ and tissue differentiation. Prereq: Zoöl 220 or equiv. Aut: lect and lab, Tu, Th, 1-4, DUSHANE.

**\*318. General Embryology.**—An outline of the principles and mechanisms of development. Fundamentals of experimental and comparative embryology. Prereq: Zoöl 220 or equiv. Sum, Aut: lect and lab, M, W, F, 9-12, WEISS.

**\*319. Developmental Analysis of the Nervous System.**—Experimental study of the factors involved in the anatomical and functional differentiation of the nervous system. Growth, regeneration, specificity of peripheral nerves and nerve centers; relation between nerves and nonnervous tissues; development of behavior. Prereq: Zoöl 220. Spr: lect and lab, M, W, F, 9-12, WEISS.

**\*352. Endocrines and Reproduction.**—A study of morphology and physiology of the reproductive system of vertebrates. Laboratory work, lectures, and conferences. Primarily for advanced students in zoölogy. Class limited. Prereq: Zoöl 205 and 220. Win: lect and lab, M, 1-2; W, F, 1-4; MOORE.

**\*399. Problems in Experimental Zoölogy.**—An individual problem course in beginning research for advanced students to undertake individual laboratory or library problems in special phases of zoölogy—experimental embryology, biology of sex, ecology, animal behavior, neurobiology, genetics. Registration only after consultation with appropriate instructor. Each qr, hrs to be arranged, STAFF.

**406. Experimental Embryology of the Nervous System.**—Analysis of the factors operating in the development, regeneration, and adjustments of the nervous system, particularly in relation to its functions. Lectures and discussion. Sum, hrs to be arranged, WEISS.

**415. Problems of Speciation.**—An analysis of the physiological, ecological, and geographic factors associated with the origin of species; techniques of research. Spr, hrs to be arranged, EMERSON.

**417. The Biology of Populations.**—An analysis of the factors associated with the growth, oscillation, and decline of experimental, natural, and human populations. Sum, hrs to be arranged, PARK.

**430. Physiology of Reproduction.**—A consideration of problems relating to reproduction among the vertebrates. Prereq: Zoöl 205 and 220 or equiv. Aut, hrs to be arranged, MOORE.

**\*450. Zoölogical Problems.**—Research work for advanced students. Prereq: Training essential for the special topic undertaken. Hrs to be arranged, STAFF.

**\*452. Zoölogical Problems.**—Research, Woods Hole, STAFF.

#### COURSES NOT OFFERED IN 1943-44

**351. Biology of the Endocrines.**—MOORE.

**411. Animal Aggregations.**—ALLEE.

**416. Problems in the Biology of Social Insects.**—EMERSON.

**422. The Biology of Sex.**—MOORE.

#### RELATED COURSES

**Anat 305. Histology.**

**Bact 320. Parasitology.**

**Geol 360, 361. Invertebrate Paleontology.**

**Geol 370, 371. Vertebrate Paleontology.**

**Physiol 403, 404. General Physiology.**

## ALUMNI ASSOCIATION OF THE SCHOOL OF MEDICINE OF THE UNIVERSITY OF CHICAGO

### OFFICERS

President.....	JOHN PROHASKA
First Vice-President.....	GRAHAM KERNWEIN
Second Vice-President.....	BERNARD G. SARNAT
Secretary.....	GAIL M. DACK
Delegates to the Alumni Council of the University.....	<div style="display: inline-block; vertical-align: middle;"> <div style="display: flex; align-items: center;"> <div style="font-size: 3em; margin-right: 5px;">{</div> <div> GAIL M. DACK  JOHN PROHASKA  BERNARD G. SARNAT </div> </div> </div>

## ALUMNI ASSOCIATION OF RUSH MEDICAL COLLEGE

### OFFICERS

President.....	CARL O. RINDER
First Vice-President.....	RUDOLPH W. HOLMES
Second Vice-President.....	EDWARD A. OLIVER
Third Vice-President.....	ETHEL M. DAVIS
Necrologist.....	FRANK ALLIN
Secretary-Treasurer.....	JOHN M. DORSEY
Directors.....	<div style="display: inline-block; vertical-align: middle;"> <div style="display: flex; align-items: center;"> <div style="font-size: 3em; margin-right: 5px;">{</div> <div> ALBERT H. MONTGOMERY  A. R. METZ </div> </div> </div>

## DEGREES CONFERRED, 1942-43

### MASTER OF SCIENCE IN THE MEDICAL SCIENCES

#### *June, 1942*

Leola Evelyn Borgstrom.....	Biochemistry
Vincent Paul Hollander.....	Biochemistry
Helen Valerie Karr.....	Bacteriology and Parasitology
Marguerite Nettleton Swift.....	Physiology

#### *September, 1942*

Charles Frederick Dupee.....	Physiology
Arthur Loewy.....	Physiology
John Robert Russell.....	Physiology

#### *December, 1942*

Muriel Ruekberg Last.....	Pharmacology
John Ferguson Thomson.....	Biochemistry
Edward Victor Zegarelli.....	Pathology

## DEGREE OF DOCTOR OF PHILOSOPHY IN THE MEDICAL SCIENCES

### *June, 1942*

Grant Rogers Bartlett.....	Biochemistry
Andrew Franklin Burton.....	Pharmacology
Howard George Glass.....	Pharmacology
Carter Dupuy Johnston.....	Biochemistry
Paul Lewis Munson.....	Biochemistry
Harvey Milton Patt.....	Physiology
Edwin Glover Riley.....	Bacteriology and Parasitology

### *September, 1942*

Walter Monroe Booker.....	Physiology
William Francis Hewitt, Jr.....	Physiology
Ormond Clinkenbeard Julian.....	Surgery

### *December, 1942*

Earl Hamilton Dearborn.....	Pharmacology
Raymond Edgar Weston.....	Physiology

### *March, 1943*

Leo Robert Melcher.....	Bacteriology and Parasitology
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## DEGREE OF DOCTOR OF MEDICINE

### I. THE SCHOOL OF MEDICINE OF THE UNIVERSITY OF CHICAGO

#### *June, 1942*

Catherine Audrey Armstrong	Edward Backus Kinports
Frank Harrison Belfus	John Austin Larrabee
Hugh de Evereaux Bennett	Robert Roy Morris
Joachim Henry Billig	William Francis Renner
Carl Emery Billings	Francis La Verne Rook
Harvey Blank	Isadore Rossman
William Holmes Bond	Reon Harold Sanders
William Lee Brown, Jr.	Earl Stanley Stephenson
Paul Leslie Bunce	Robert Tulloch Stormont
Richard Keith Currier	Warren Vesta Stough
Howard Carr Dibble	Herbert David Trace
Herbert Rueben Domke	Kirsten Vennesland
Thomas Francis Dwyer	Lillie Cutlar Walker
LeRoy William Earley	Marjorie Inez White
Marvin Stanley Freilich	Charles Francis Williams
James McIlroy Fritz	Lucius Walker Wimby III
Paul Holley Gray	Edward Roy Woodward
Robert Preston Hall	
Lyndon Marcus Hill	
Katherine Eileen Hite	
Theron Lingard Hopple	
William Strobel Hunter	

#### *September, 1942*

George Richard Barry
Peter Lewis Beal
Donald Gregory Bradshaw
Charles Edwin Brighton



Robert Hastings Dreisbach  
Robert Higgins Ebert  
Hampton Hill Trayner  
Frederick Julian Wahl

*December, 1942*

Charles Emmett Marshall  
Donald Fiedler McDonald  
Joseph Edgar Meritt, Jr.  
Charles William Pfeiffer  
Felix Edward Simon

*March, 1943*

Robert Ramsey Bigelow  
Byron Laurence Casey, Jr.  
Frederick William Cottrell  
Marvin Dale Courtney  
Walter Bedford Cox  
Garnet Campbell Cutler  
Walter Douglas Davis  
Anthony Raymond Furmanski

Robert Karl Gassler  
Grace Baker Goebel  
Duncan Asa Holaday  
Herbert Clarence Johnson  
Carl C. Magdsick, Jr.  
Charles Price McCartney  
Donald Murdoch McIntyre  
Richard Vincent McKay, Jr.  
Clinton Wilkins Morgan, Jr.  
Arthur Hawley Parmelee, Jr.  
Harold Rawson Reames  
Edward Duncan Robbins  
Louis Rubin  
John Walter Sloan  
Ralph Ogilvy Smith  
Kenath Herrick Sponsel  
William Stone  
Colin Gordon Thomas, Jr.  
Robert Charles Walter  
Glen Martin Whitesel  
Merton Frederick Wilson

## II. RUSH MEDICAL COLLEGE

*June, 1942*

Donald Leo Alcott  
Louis Clayton Allard  
John Martin Ayers  
Richard Barnard Berlin  
William Frederick Bethard  
Herman Frederick Boerner, Jr.  
Robert Barry Brugman  
Anthony John M. D. Brunse  
Harold Everhard DePree  
Frederic Barrett Emery  
Edward Alfred Evans  
Joseph Bertrand Finney  
Russell Lawrence Hafer  
Edward Jordan Hagan  
Eugene Yeates Hall  
Helen Jane Hare  
William Winchester Hart  
Kenneth Tower Hubbard  
Royal Ernest Ihrke  
Paul Clarke Irvine  
John Reynolds Irwin  
Harold Smith Jenson  
Frank Waters Johnson  
Robert Edward Kirschman

Klaire Van Zanten Kuiper  
Frank Wisner Lynn  
Richard Joseph Maginn  
Nathan Hall Mahon  
Hugh Alexander McIntosh  
Hyman Jules Meltzer  
Walter Weldon Meyers  
Robert James Mitchell, Jr.  
Vera Morkovin  
Holger Spaabeck Mouritsen  
Thomas Yoshinobu Nakao  
Milton Everett Nugent  
Francis Joseph Quincannon  
Bernard Daniel Ross  
Gordon Leroy Schlick  
Edward William Schlies  
Elwin Powers Scott  
John Robert Tobin, Jr.  
Eugene Jack Usow  
Jerome Waldman  
Richard Russell Weigler  
Elsie Chilman Winchester  
William Wellington Winchester  
John Paul Young, Jr.

## LIST OF STUDENTS

### THE SCHOOL OF MEDICINE OF THE UNIVERSITY OF CHICAGO

The following list includes only those students who were in attendance during one or more quarters of the academic year 1942-43.

NOTES.—The naming of a degree not followed by the name of an institution is understood to mean a degree conferred at the University of Chicago.

In cases in which no institution is named, it is understood to mean that the student began his college career at the University of Chicago.

In cases in which no state is mentioned, Illinois is understood.

ABBREVIATIONS.—U. = University; C. = College; S. = School; Inst. = Institute.

PERIOD OF RESIDENCE.—*s* = residence during Summer Quarter, 1942; *a* = during Autumn Quarter, 1942; *w* = during Winter Quarter, 1943; *sp* = during Spring Quarter, 1943.

STARRED (\*) NAMES indicate clinical students in Albert Merritt Billings Hospital.

NUMBERS before names indicate the class (1 = Freshman, 2 = Sophomore, 3 = Junior, 4 = Senior) as of the Winter Quarter, 1943, or of the last Quarter in residence.

- 1 Aalpoel, Justin Arthur, *s, a, w, sp*, Lynden, Wash. Hope C.  
Abel, Donald Arthur, *sp*, Riverside.
- 3 \*Adland, Marvin Leon, *s, a, w, sp*, Chicago. S.B. '41.
- 1 Ahern, James Joseph, *a, w, sp*, Bellingham, Wash. S.B., U. of Washington, '38.  
Ambuel, John Philip, *sp*, Broadus, Mont. A.B., Luther C., '41.
- 1 Anderson, Thomas Warren, *s, a, w, sp*, Fargo, N.D., North Dakota Agricultural C.
- 1 Antel, John Joseph, *s, a, w, sp*, Cleveland, Ohio.
- 2 \*Armoush, Joseph John, *a, w, sp*, Central Falls, R.I. S.B., Boston U., '40.  
Arnold, John David, *sp*, Bradford, Ohio.
- 1 Arnolde, Herbert Albert, *s, a, w, sp*, Chicago. S.B. '42.
- 4 \*Bailey, Ralph Jordan, *s, a, w, sp*, Pittsburgh, Pa. Ph.D., U. of Wisconsin, '32.
- 2 \*Barickman, Robert Irving, *s, a, w, sp*, Streator. S.B. '41.
- 4 \*Barker, Wayne, *s, a, w, sp*, Chicago. S.B. '40.
- 3 \*Barnes, Kenneth Orville, *s, a, w, sp*, Seattle, Wash. U. of Washington.  
Barrash, Meyer Joseph, *sp*, Chicago.
- 4 \*Barry, George Richard, *s*, Chicago. S.B. '40.
- 3 \*Bartlett, Jay Paxton, *s, a, w, sp*, Ogden, Utah. S.B. '42.  
Barton, Gerald Delbert, *sp*, Rupert, Idaho. S.B., U. of Idaho, '41.  
Basinger, Clair Eugene, *sp*, Pandora, Ohio. A.B., Oberlin C., '43.
- 4 \*Beal, Peter Louis, *s*, Chicago. S.B. '38.
- 3 \*Beal, Robert Lee, *s, a, w, sp*, Anaconda, Mont. A.B., Montana State U., '40.
- 4 \*Beattie, George Chapin, *a, w, sp*, Bowling Green, Ohio. A.B., Bowling Green State C., '39.  
Beaubien, Mark Stratton, *sp*, Whiting, Ind.
- 4 \*Becker, Robert Mettler, *s, a, w, sp*, Pasadena, Calif. A.B., Oberlin C., '39.  
Berger, Jack, *sp*, Oak Park.
- 4 \*Bigelow, Robert Ramsey, *s, a, w*, Chicago. S.B. '41.  
Billmeyer, Daniel Kenneth, *sp*, Chicago.
- 1 Block, Bernard, *s, a, w, sp*, Chicago. Ph.D., '41.
- 4 \*Block, Mathew Harold, *s, a, w, sp*, Brooklyn, N.Y. Ph.D., '41.
- 4 \*Bolz, John Arnold, *s, a, w, sp*, Elgin. S.B. '41.
- 4 \*Bond, Alan Brandon, *s, a, w, sp*, Chicago. S.B. '41.
- 4 \*Bonfiglio, Michael, *a, w, sp*, Milwaukee, Wis. A.B., Columbia U., '40.
- 4 \*Bradshaw, Donald Gregory, *s*, San Antonio, Fla. S.B., U. of Florida, '32.
- 2 \*Branthaver, Charles Augustus, *s, a, w, sp*, Beloit, Wis. S.B., Beloit C., '41.

- 4 \*Brighton, Charles Edwin, *s*, Coffeyville, Kan. S.B. '39.
- 1 Brooks, Henry Franklyn, *s, a, w, sp*, Des Moines, Ia. Iowa State C.  
Brown, Harold Zelig, *sp*, Chicago.  
Budge, Reed William, *sp*, Logan, Utah. Utah State Agricultural C.  
Bunderson, Dean Linford, *sp*, Brigham City, Utah. Utah State Agricultural C.
- 2 \*Canzonetti, Andrew Joseph, *s, a, w, sp*, New Britain, Conn. A.B., Ohio U., '42.
- 3 \*Carey, Josh Harlan, *a, w, sp*, Coeur d'Alene, Idaho. A.B., U. of Idaho, '39.
- 1 Carlson, Ralph Frederick, *s, a, w, sp*, Hyrum, Utah. Utah State Agricultural C.
- 3 \*Carpenter, Richard Everett, *a, w, sp*, Shawnee, Okla. A.B., U. of Colorado, '39.
- 4 \*Casey, Byron Laurence, *s, a, w, sp*, Park Ridge. S.B., U. of Notre Dame, '39.  
Cashman, John William, *sp*, Kansas City, Mo. U. of Rochester.
- 1 Cataldo, Marne, *s, a, w, sp*, Chicago.
- 2 Chase, William Edward, *s, a, w*, Rexburg, Idaho. S.M., U. of Idaho, '40.
- 1 Clark, Johnson, *s, a, w, sp*, Winnetka. Princeton U.  
Collins, Joseph Kennard, *sp*, Toledo, Ohio. S.B., U. of Toledo, '43.
- 3 \*Connor, Arthur Charles, *s, a, w, sp*, Chicago. S.B. '41.
- 1 Cook, Robert Ernest, *s, a, w, sp*, Chicago.
- 1 Cooke, Robert Finley, *s, a, w, sp*, Maumee, Ohio. U. of Toledo
- 3 \*Cope, Beverly Alden, *s, a, w, sp*, Pullman, Wash. S.B., Washington State C., '40.
- 4 \*Cottrell, Frederick William, *s, a, w*, Centerville, Utah. S.B. '41.
- 4 \*Courtney, Marvin Dale, *s, a, w*, Spokane, Wash. S.B., U. of Washington, '39.
- 4 \*Cox, Walter Bedford, *s, a, w, sp*, Chicago. S.B. '40.
- 1 Crosbie, James, *s, a, w, sp*, Chicago.
- 4 \*Cutler, Garnet Campbell, *s, a, w*, West Lafayette, Ind. S.B., Purdue U., '39.
- 3 \*D'Alessandro, Alfred Joseph, *s, a, w, sp*, Brooklyn, N.Y. S.B., West Virginia U., '41.
- 4 \*Davis, Walter Douglas, *s, a, w*, Chicago. A.B., Wesleyan U., '39.
- 1 DeWind, Loren Thomas, *s, a, w, sp*, Muskegon, Mich. A.B. Calvin C., '42.
- 4 \*Dodds, Richey Floyd, *s, a, w, sp*, Starkville, Miss. S.B., Mississippi State C., '38.
- 3 \*Dondanville, Joseph Martin, *s, a, w, sp*, Moline. A.B., Holy Cross C., '40.
- 3 \*Dorfman, Albert, *sp*, Chicago. Ph.D. '39.
- 4 \*Dreisbach, Robert Hastings, *s*, Baker, Ore. Ph.D. '42.  
Drennan, William Clay, *sp*, Oak Park. Brown U.
- 2 \*Dupree, Charles Frederick, *s, a, w, sp*, Chicago. S.M. '42.
- 4 \*Ebert Robert Higgins, *s*, Chicago. S.B. '36.
- 2 Eby, Edwin George, *s, a, w, sp*, South Haven, Mich. S.B. '42.  
Edgcomb, John Harold, *sp*, Ottawa.  
Enerson, Daniel Milton, *sp*, Glen Ellyn.
- 2 \*Evans, Arthur Thompson, Jr., *s, a, w, sp*, Oxford, Ohio. A.B., Miami U., '41.
- 2 \*Evans, Frank Fraser, *s, a, w, sp*, Chicago. S.B. '42.
- 1 Evans, Lewis Hansen, *s, a, w, sp*, Oxford, Ohio. S.B., Miami U., '42.
- 3 \*Farber, Jack Russell, *s, a, w, sp*, Payette, Idaho. S.B., U. of Idaho, '40.  
Farr, Richard Studley, *sp*, Highland Park, Mich. Hamilton C.
- 2 \*FERENCE, Edward George, *s, a, w, sp*, Whiting, Ind. S.B. '42.  
Finberg, Laurence, *sp*, Chicago.
- 3 \*Findley, John Walker, Jr., *s, a, w, sp*, West Lafayette, Ind. S.B., Purdue U., '40.
- 1 Fineberg, Richard Arnold, *s, a, w, sp*, Chicago. S.B. '42.
- 2 \*Fink, Victor Herbert, *s, a, w, sp*, Ramsay, Mich. S.B. '42.
- 1 Fischer, Harry William, *s, a, w, sp*, St. Louis, Mo.
- 3 \*Fitzgerald, Robert Edward, *s, a, w, sp*, Yankton, S.D. S.B. '41.
- 3 \*Fleming, Joseph Louis, *s, a, w*, Chicago. S.B. '41.
- 3 \*Folson, John David, *s, a, w, sp*, Lincoln, Nebr. S.B. '42.
- 2 \*Fox, David Sharpless, *s, a, w, sp*, Chicago. S.B., Haverford C., '43.

- 2 \*Fox, William Pruner, *s, a, w, sp*, Oak Park. S.B. '42.  
Francke, Paul, Jr., *sp*, Ottawa Hills, Ohio. U. of Toledo.
- 3 \*Frank, Hugh Allen, *w, sp*, Chicago. S.B. '41.
- 4 \*Freeman, Leslie Willard, *s, a, w, sp*, Chicago. Ph.D. '40.
- 2 \*Frey, James Leonard, *s, a, w, sp*, Highland Park, Mich. S.B. '42.
- 3 \*Froemming, William Eugene, *s, a, w, sp*, Sioux Falls, S.D. S.B. '41.
- 4 \*Furmanski, Anthony Raymond, *s, a, w*, Bessemer, Mich. S.B. '42.
- 2 Gabelman, Charles Grover, Jr., *s, a, w*, Denver, Colo. S.B. '42.  
Gabrielsen, Lyman Conrad, Jr., *sp*, Logan, Utah. Utah State Agricultural C.  
Garrard, Willis Dolan, *sp*, Eagle, Idaho. S.B., U. of Idaho, '42.
- 4 \*Gassler, Robert Karl, *s, a, w*, Chicago. A.B., Oberlin C., '39.
- 1 Gibbons, Glen Andrew, *s, a, w, sp*, Phoenix, Ariz. U. of California.
- 2 Gibler, William Karl, *s*, Grand Rapids, Mich. S.B. '43.
- 1 Gilliland, Hilda Virginia, *a, w, sp*, Columbus, Ohio. S.M., State C. of Washington, '41.
- 2 \*Gingrich, Gerald Wellington, *s, a, w, sp*, Grand Rapids, Mich. S.B. '42.
- 2 \*Giovacchini, Peter Louis, *s, a, w, sp*, Chicago. S.B. '41.
- 4 \*Goebel, Grace Baker, *s, a, w*, Uniontown, Pa. A.B., Manchester C., '39.
- 1 Goodfellow, Joyce Kathleen, *s, a, w, sp*, Chicago.
- 2 \*Goodman, Raymond Dennis, *s, a, w, sp*, Chicago. S.B. '42.
- 2 \*Gootnick, Lester, *s, a, w, sp*, Chicago. S.B. '42.  
Graff, Philip Weber, *sp*, Salem, Ohio. Muskingum C.
- 3 \*Gray, Arthur Martin, *s, a, w, sp*, Chicago. S.B. '42.  
Green, John Walker, Jr., *sp*, Springfield. Harvard C.  
Greenwold, Warren Eldon, *sp*, Chicago.
- 1 Griffith, Charles Allen, Jr., *s, a, w, sp*, River Forest. A.B., Harvard C., '42.
- 2 \*Grotts, Bruce Frederick, *s, a, w, sp*, Pittsburgh, Pa. S.B. '42.
- 1 Hall, Frank Richard, *s, a, w, sp*, River Forest. Northwestern U.
- 2 \*Hall, William Anson, *s, a, w, sp*, Belmont, N.Y. A.B., Alfred U., '40.
- 3 \*Hand, William James, *s, a, w, sp*, Chicago. S.B. '41.  
Hanni, John William, *sp*, Toledo, Ohio. A.B., Oberlin C., '43.  
Hanson, Martin Everett, *sp*, Cedar Rapids, Ia.
- 2 Harward, Thomas Glenn, *s, a, w, sp*, Blackfoot, Idaho. S.B., U. of Idaho, '41.  
Hathaway, Earl Allen, *sp*, Chicago.
- 3 \*Hearne, Walter Richard, *s, a, w, sp*, Chicago. S.B. '42.  
Heinzen, Bruce Robert, *sp*, Sheboygan, Wis. A.B., Oberlin C., '42.
- 4 \*Hellbaum, Arthur Alfred, *s, a, w, sp*, Oklahoma City, Okla. Ph.D., U. of Wisconsin, '34.
- 2 \*Hellyer, David Tirrell, *s, a, w, sp*, Eatonville, Wash. A.B., Yale U., '36.
- 3 \*Henry, Winston, *s, a, w, sp*, Chicago. S.B. '41.
- 2 Hepner, Walter Ray, Jr., *s, a, w*, San Diego, Calif.
- 1 Hesse, Frank Edward, *s, a, w, sp*, Chicago.
- 1 Hilgert, Frederick Logan, *s, a, w, sp*, Laurel, Mont. U. of Wyoming.
- 4 \*Hobson, Lawrence Bennett, *a, w, sp*, Fort Smith; Ark. Ph.D., U. of Cincinnati, '41.  
Hodges, Lorna Ann, *sp*, Chicago. S.B. '42.  
Hoegen, Joseph Thomas, *sp*, Wyoming, Ia.  
Hogness, John Rusten, *sp*, Chicago. S.B. '43.
- 4 \*Hohm, Paul Harrold, *a, w, sp*, Huron, S.D. A.B., Huron C., '39.
- 4 \*Holaday, Duncan Asa, *s, a, w*, Highland Park, N.J. S.B. '40.
- 3 \*Hopple, Henry Edgar, *s, a, w, sp*, Toledo, Ohio. S.B. '41.
- 1 Horner, Edward N., *s, a, w, sp*, Chicago.
- 1 Huckleberry, Neel Irwin, *s, a, w, sp*, Tillamook, Ore. U. of Oregon.
- 3 \*Hume, David Milford, *s, a, w, sp*, Muskegon, Mich. S.B., Harvard U., '40.



- 2 \*Hunt, Van William, *s, a, w, sp*, Chicago. S.B., McPherson C., '37.
- 3 \*Huxsol, Alfred Russell, *s*, Wolf Point, Mont. A.B., Stanford U., '32.  
Isaacs, Julien Harry, *sp*, Chicago.
- 2 \*Jampolis, Robert Warren, *s, a, w, sp*, Chicago. S.B. '41.
- 2 \*Janda, Rudolph, *s, a, w, sp*, Berwyn. S.B. '42.  
Jaros, Duval Brown, *sp*, Chicago.
- 3 \*Jernegan, Joseph Leonard, Jr., *s, a, w, sp*, Elmhurst. S.B., Beloit C., '40.
- 2 \*Jim, Vernon Kang Sung, *s, a, w, sp*, Maui, T.H. S.B. '42.
- 1 Johnson, Charles Michael, Jr., *s, a, w, sp*, Chicago.
- 4 \*Johnson, Herbert Clarence, *s, a, w*, Racine, Wis. S.B. '40.
- 4 \*Johnson, Maxwell Allis, *s, a, w, sp*, Chicago. S.B. '41.
- 2 \*Joranson, Robert Eric, *s, a, w, sp*, Chicago. S.B. '40.
- 2 \*Jordan, Paul Howard, Jr., *s, a, w, sp*, Peoria. S.B. '41.
- 2 \*Kahn, Alfred Jerome, *w, sp*, Chicago. S.B. '40.  
Kahoun, Jack Edmond, *sp*, Berwyn.
- 2 \*Karn, John William, *s, a, w, sp*, Mishawaka, Ind. S.B. '42.
- 2 \*Kash, Woodrow Joseph, *s, a, w, sp*, Chicago. S.B. '42.
- 1 Kasle, Travis, *s, a, w, sp*, Toledo, Ohio. S.B. '40.
- 1 Kelly, Annetta Rosaline, *s, a, w, sp*, Napoleon, Ohio. Bowling Green State U.
- 2 \*Kenward, John Franklin, *s, a, w, sp*, Gary, Ind. S.B. '42.
- 2 \*Kimerer, Neil Banard, *s, a, w, sp*, Toledo, Ohio. S.B., U. of Toledo, '41.
- 2 \*Kinyon, Barbara, *s, w, sp*, Owatonna, Minn. A.B., Wellesley C., '39.
- 1 Kittle, Charles Frederick, *s, a, w, sp*, Athens, Ohio. A.B., Ohio U., '42.  
Kozy, John Stanley, *sp*, Toledo, Ohio. U. of Toledo.
- 1 Krakowka, George Frank, *s, a, w, sp*, Great Bend, N.Y.
- 1 Langdon, Robert Godwin, *s, a, w, sp*, Dallas, Texas. Southern Methodist U.
- 4 \*Lefforge, Edward Everett, *s, a, w, sp*, Chicago. Manchester C.  
Leviton, Max, *sp*, Rock Island.
- 4 \*Loewy, Arthur, *s, a, w, sp*, Chicago. S.M. '42.
- 1 Lombardi, John Paul, *s, a, w, sp*, Brooklyn, N.Y. S.B., Fordham U., '42.  
Lorincz, Albert Bela, *sp*, Chicago.  
Lukasek, Edward Otto, *sp*, Oak Park.
- 1 Lum, Ralph, Jr., *s, a, w, sp*, Jackson, Mich. S.B. '42.  
MacDuffee, Robert Colton, *sp*, Forest Hills, N.Y.
- 2 \*Madden, Thomas James, *s, a, w, sp*, Aurora. S.B. '42.
- 3 \*Mafit, Ted Rudolph, *s, a, w, sp*, Chicago. S.B. '41.
- 4 \*Magdsick, Carl C., Jr., *s, a, w*, Charles City, Ia. A.B., Grinnell C., '39.
- 1 Maher, Chauncey Carter, Jr., *s, a, w, sp*, Madison, Wis.
- 4 \*Malott, Raymond Roderick, *s, a, w, sp*, Gary, Ind. S.B. '42.
- 2 \*Marchello, Albino John, *s, a, w, sp*, Red Lodge, Mont. S.B. '41.
- 4 \*Marshall, Charles Emmett, *s, a*, Chicago. S.B. '38.
- 4 \*Mauthe, Howard, *s, a, w, sp*, Milwaukee, Wis. Ph.D. '41.
- 3 \*Mayer, Shirley Anna, *s, a, w, sp*, Ozone Park, N.Y. A.B., Hunter C., '40.
- 4 \*McCartney, Charles Price, *s, a, w*, Great Falls, Mont. S.B. '42.
- 3 \*McCormack, Robert Morris, *s, a, w, sp*, Sheboygan, Wis. A.B., Swarthmore C., '40.  
McCroskey, Charles Henry, *sp*, Kansas City, Kan. Harvard U.
- 2 \*McCullough, Norman B., *s, a, w, sp*, Chicago. Ph.D. '37.
- 3 \*McCune, Wallace Gilfillan, *s, a, w, sp*, Ellsworth, Pa. A.B., Washington & Jefferson C., '40.
- 4 \*McDonald, Donald Fiedler, *s, a*, Chicago Heights.
- 1 McGrath, James Russell, *s, a, w, sp*, Grand Island, Nebr. Doane C.
- 4 \*McIntyre, Donald Murdoch, *s, a, w*, St. John, Wash. A.B., U. of Washington, '39.

- 4 \*McKay, Richard Vincent, Jr., *s, a, w*, Dubuque, Ia. S.B., U. of Notre Dame, '39.
- 2 \*McWhorter, Henry Etten, *s, a, w, sp*, Chicago. S.B. '42.
- 4 \*Meritt, Joseph Edgar, Jr., *s, a*, Rhineland, Mo. A.B., U. of Missouri, '38.
- 1 Miles, James Scherling, *s, a, w, sp*, Albuquerque, N.M. A.B., Grinnell C., '42.
- 4 \*Minard, David, *s, sp*, Fargo, N.D. Ph.D. '37.
- 1 Mindell, Eugene Robert, *s, a, w, sp*, Chicago.  
Mintek, Victor Joseph, *sp*, Chicago.  
Moceri, James Paul, *sp*, Sumner, Wash. U. of Washington.
- 4 \*Morgan, Clinton Wilkins, Jr., *s, a, w*, Lombard. A.B., Duke U., '39.  
Morley, Buel, *sp*, Toledo, Ohio. U. of Michigan.
- 1 Moulder, Peter Vincent, Jr., *s, a, w, sp*, Evanston. S.B., U. of Notre Dame, '42.
- 2 Moulton, Stanley Hanson, *s, a, w, sp*, Chicago.
- 3 \*Mowery, Charles Rothelles, Jr., *s, a, w, sp*, Spokane, Wash. S.B. '41.
- 3 \*Mulder, Gerrit Arthur, *s, a, w, sp*, Estelline, S.D. S.B. '41.  
Munnell, Edward Robert, *sp*, Jackson, Mich. U. of Michigan.
- 3 \*Murray, William Henry Thomas, *s, a, w, sp*, Santa Monica, Calif. S.B., Monmouth C., '40.
- 2 \*Nardi, George Lionel, *s, a, w, sp*, Chicago. S.B. '41.
- 1 Nelson, Karl Dexter, *s, a, w, sp*, Princeton.  
Nelson, Kenneth Oliver, *sp*, Princeton.
- 2 \*Newman, Melvin Micklin, *s, a, w, sp*, Chicago. S.B. '42.
- 1 Nicholson, Ruth Lynn, *s, a, w, sp*, Longview, Texas. U. of Texas.
- 4 \*Oester, Yvo Thomas, *s, sp*, Chicago. Ph.D. '38.  
Oleson, Dunlap Wrisley, *sp*, Glen Ellyn.  
Orwoll, Harold Sylfest, *sp*, Decorah, Ia. Ph.D., Michigan State C., '40.  
Owen, Howard Wayne, *sp*, Decorah, Ia. Luther C.
- 3 \*Parks, Joseph Algernon, Jr., *s, a, w, sp*, Washington, D.C. S.B., U. of Maryland, '40.
- 4 \*Parmelee, Arthur Hawley, Jr., *s, a, w*, Chicago. S.B. '40.
- 1 Partridge, John Warwick, *s, a, w, sp*, Pasadena, Calif. U. of California.
- 2 \*Pattee, James Jay, Jr., *s, a, w, sp*, Pueblo, Colo. A.B., Harvard U., '41.
- 2 \*Pearce, Morton Lee, *s, a, w, sp*, Chicago. S.B. '41.
- 1 Perkins, Ruth, *s, a, w, sp*, Savannah, N.Y.
- 4 \*Pfeiffer, Charles William, *s, a*, Racine, Wis. S.B. '40.
- 1 Pizzo, Anthony, *s, a, w, sp*, Indianapolis, Ind.
- 3 \*Plunkett, John Patrick, *s, a, w, sp*, Red Lodge, Mont. S.B. '41.
- 3 \*Pond, Vaughn Maurice, *s, a, w, sp*, Logan, Utah. S.B., Utah State Agricultural C., '40.
- 4 \*Powell, Chester Badollet, *s, a, w, sp*, Chicago. S.B. '40.
- 1 Raymond Phillip Dean, *s, a, w, sp*, Western Springs.
- 4 \*Reames, Harold Rawson, *s, a, w*, Grand Ledge, Mich. Ph.D. '40.
- 1 Reiser, Howard Gordon, *s, a, w, sp*, Chicago. S.B., Illinois Inst. of Technology, '42.
- 3 \*Reynolds, William Elliot, *s, a, w, sp*, Tacoma, Wash. S.B., C. of Puget Sound, '40.
- 2 \*Rider, Joseph Alfred, *s, a, w, sp*, Riverside. S.B. '42.
- 4 \*Robbins, Edward D., *s, a, w*, Bayonne, N.Y. S.B. '39.
- 2 \*Robertson, Alan Morley, *s, a, w, sp*, Chicago. S.B. '41.  
Robertson, Raymond Edgar, *s, a, w, sp*, Indianapolis, Ind. Purdue U.
- 4 \*Rubin, Louis, *s, a, w*, Rock Falls. S.B. '39.
- 2 \*Rubinfine, David Lawrence, *s, a, w, sp*, Chicago. S.B. '41.
- 1 Russell, John Robert, *s, a, w, sp*, Chicago. S.M. '42.
- 2 \*Russell, Lee Albert, *s, a, w, sp*, Chicago. S.B. '42.
- 1 Savage, Charles, *s, a, w, sp*, Berlin, Conn. A.B., Yale U., '39.  
Schaeffer, John Henry, *sp*, Michigan City, Ind.
- 3 \*Schaffner, Fenton, *s, a, w, sp*, Chicago. S.B. '41.

- 2 \*Schlageter, Charles William, *s, a, w, sp*, Chicago. S.B. '42.
- 1 Schmidt, Roland Eugene, *s, a, w, sp*, Klickitat, Wash. A.B., U. of Washington, '39.
- 3 \*Schneider, John Joseph, *s, a, w, sp*, Minneapolis, Minn. S.B., U. of Minnesota, '37.
- 3 \*Schoenberger, James Alan, *s, a, w, sp*, Cleveland Heights, Ohio. S.B. '41.
- 3 \*Schreider, Jonas, *s, a, w, sp*, Chicago. S.B. '37.  
Schulman, Sidney, *sp*, Chicago.
- 2 \*Scott, Orland Brebner, *s, a, w, sp*, Coeur d'Alene, Idaho. S.B., U. of Idaho, '40.  
Senz, Edward Henry, *sp*, Streator.
- 3 \*Sever, Buel Laud, *s, a, w, sp*, Pullman, Wash. S.B., Washington State C., '40.  
Sibley, John Adams, *sp*, Rockford. S.B., Massachusetts Inst. of Technology, '43.
- 4 \*Siever, Paul William, *s, a, w, sp*, Chicago. S.B. '42.
- 4 \*Simon, Felix Edward, *s, a*, Riverton, Wyo. S.M., U. of Wyoming, '37.
- 2 \*Simon, Richard DeLoe, Toledo, Ohio. S.B., U. of Toledo, '41.
- 4 \*Sloan, John Walter, *s, a, w*, McAllen, Texas. A.B., Grinnell C., '39.  
Smith, Lawrence Frederick, *sp*, Decorah, Ia. S.M., Iowa State C., '41.
- 1 Smith, Louis Spencer, *s, a, w, sp*, Dallas, Texas. Southern Methodist U.
- 4 \*Smith, Ralph Ogilvy, *s, a, w*, Seattle, Wash. S.B. '40.
- 3 \*Smith, Robert Leon, *s, a, w, sp*, Chicago. S.B. '41.
- 4 \*Snapp, Robert Harvey, *s, a, w, sp*, San Diego, Calif. S.B., U. of New Mexico, '38.
- 4 \*Spencer, Malcolm Cedric, *s, a, w, sp*, Chicago. A.B., U. of Illinois, '36.
- 4 \*Sponsel, Kenath Herrick, *s, a, w*, Chicago. S.B. '41.  
Stancliffe, Floyd Savillian, *sp*, Council Bluffs, Ia. S.M., Iowa State C., '42.
- 3 \*Stanton, Roy Francis, *s, a, w, sp*, East St. Louis.
- 2 \*Staskiewicz, Thaddeus Adam, *s, a, w, sp*, Chicago.
- 1 Steffee, Clyde Harold, *w, sp*, South Bend, Ind.
- 3 \*Stephens, La Rele Joseph, *s, a, w, sp*, Palouse, Wash. A.B., U. of Idaho, '39.
- 1 Stevenson, Richard Royle, *s, a, w, sp*, Muskegon, Mich.
- 2 Stone, Bernard, *s, a, w, sp*, Chicago. S.B. '42.
- 4 \*Stone, William, *s, a, w*, Brooklyn, N.Y. A.M., Columbia U., '33.
- 1 Storer, Edward Hammond, *s, a, w, sp*, Rockland, Me.  
Strandjord, Nels Magne, *sp*, St. Olaf, Ia. A.B., Luther C., '42.
- 4 \*Strange, Dempsey Clark, *s, a, w, sp*, Fernwood, Miss. S.B. '41.
- 3 \*Straube, Robert Leonard, *a, w*, Chicago. S.B. '39.
- 1 Strueh, Paul Edward, *s, a, w, sp*, Chicago. S.B. '42.
- 1 Struxness, Erling Bjarne, *a, w, sp*, Belgrade, Minn. A.B., Luther C., '38.
- 1 Styrt, Jerome Hyman, *s, a, w, sp*, Chicago. S.B. '40.  
Swanberg, Mary Herschel, *sp*, Chicago.
- 3 \*Sweaney, Stanford King, *s, a, w, sp*, Chicago. S.B. '40.
- 4 \*Tasher, Dean Charles, *s, a, w, sp*, South Bend, Ind. S.B. '41.  
Taylor, Richard Ray, *sp*, Norton, Kan.
- 1 Taylor Stewart Ferguson, *s, a, w, sp*, Portage, Wis. Beloit C.  
Tewell, Howard Erlington, Jr., *sp*, Edinburg, Texas. U. of Texas
- 4 \*Thomas, Colin Gordon, *s, a, w*, Monticello, Texas. S.B. '40.  
Thomas, E. Gregory, *sp*, Chicago. U. of Rochester.
- 1 Thomas, Louis Barton, *s, a, w, sp*, Kuna, Idaho. A.B., C. of Idaho, '42.
- 4 \*Thompson, William Harold, *s, a, w, sp*, Seattle, Wash. A.B., U. of Washington, '37.
- 1 Tiholiz, Ivan Cyril, *s, a, w, sp*, Milwaukee, Wis.
- 1 Torri, Nello Paul, *s, a, w, sp*, Plymouth, Mass. A.B., U. of Michigan, '41.
- 4 \*Trayner, Hampton Hill, *s*, Idaho Falls, Idaho. S.B., U. of Idaho, '40.  
Trippel, Otto Hubert, *sp*, Chicago.
- Tyson, James Larkin, *sp*, Ann Arbor, Mich. U. of Michigan.
- 1 Unger, Robert Leon, *s, a, w, sp*, Stickney, S.D. A.B., Yankton C., '42.

- 2 \*Vail, Virginia Caroline, *s, a, w, sp*, Newark, N J. A.B., Wellesley C., '40.  
 2 \*VanderLaan, Cornelius A., *s, a, w, sp*, Chicago. S.B. '42.  
 1 Van Reken, Henry Everett, *s, a, w, sp*, Paterson, N.J. A.B., Calvin C., '42.  
 4 \*Wahl, Frederick, *s*, Chicago. S.B. '39.  
 2 \*Wallace, Paul Flugel, *s, a, w, sp*, Kalamazoo, Mich. Kalamazoo C.  
 4 \*Walter, Robert Charles, *s, a, w*, Okmulgee, Okla. S.B., Purdue U., '39.  
     Warden, Herbert Edgar, *sp*, Chicago. S.B., Washington & Jefferson C., '42.  
 3 \*Wasserman, Franz Walther, *s, a, w, sp*, Chicago. S.B. '41.  
 3 \*Weaver, Robert Harmon, *s, a, w*, Elkhart, Ind. S.B., Purdue U., '40.  
 3 \*Webster, William Oliver, *s, w, sp*, Ionia, Mich. S.B. '40.  
 3 Weiner, Betsy Platt, *sp*, Danville. A.B., Swarthmore C., '40.  
 4 \*Weiedr, Robert Gordon, *s, a, w, sp*, Portsmouth, Va. S.B. '41.  
     Welch, John Lorin, *sp*, Bloomington. Illinois Wesleyan U.  
 4 \*Whitesel, Glen Martin Albin, *s, a, w*, Spokane, Wash. S.B., U. of Idaho, '39.  
 3 \*Wicks, William Rutherford, Jr., *s, a, w, sp*, Hopkinsville, Ky. S.B., U. of Notre Dame, '40.  
 1 Wilhelm, Warren Fred, *s, a, w, sp*, Chicago. S.B., Beloit C., '40.  
 1 Wilner, Warren Knapp, Jr., *s, a, w, sp*, Chicago. S.B. '42.  
 4 \*Wilson, Merton Frederick, *s, a, w*, South Hadley Falls, Mass. S.B., Massachusetts State C., '39.  
 2 \*Wiseley, Allen Newton, *s, a, w, sp*, Lima, Ohio.  
 2 Wolff, Paul George, *s, a, w, sp*, Chester. S.B. '42.  
 1 Wylie, Howard Lee, *s, a, w, sp*, Tulsa, Okla. Antioch C.  
 1 Yaw, Elwood Edward, *s, a, w, sp*, Champion, Nebr. Doane C.  
 3 \*York, Clifton Grover, *s, a, w, sp*, Rupert, Idaho. E. Washington State C.  
     Zuelke, Paul Edward, *sp*, Alberton, Mont. A.B., Montana State C., '43.  
 2 Zuidema, Jacob Junior, *s, a, w, sp*, Holland, Mich. A.B., Hope C., '41.

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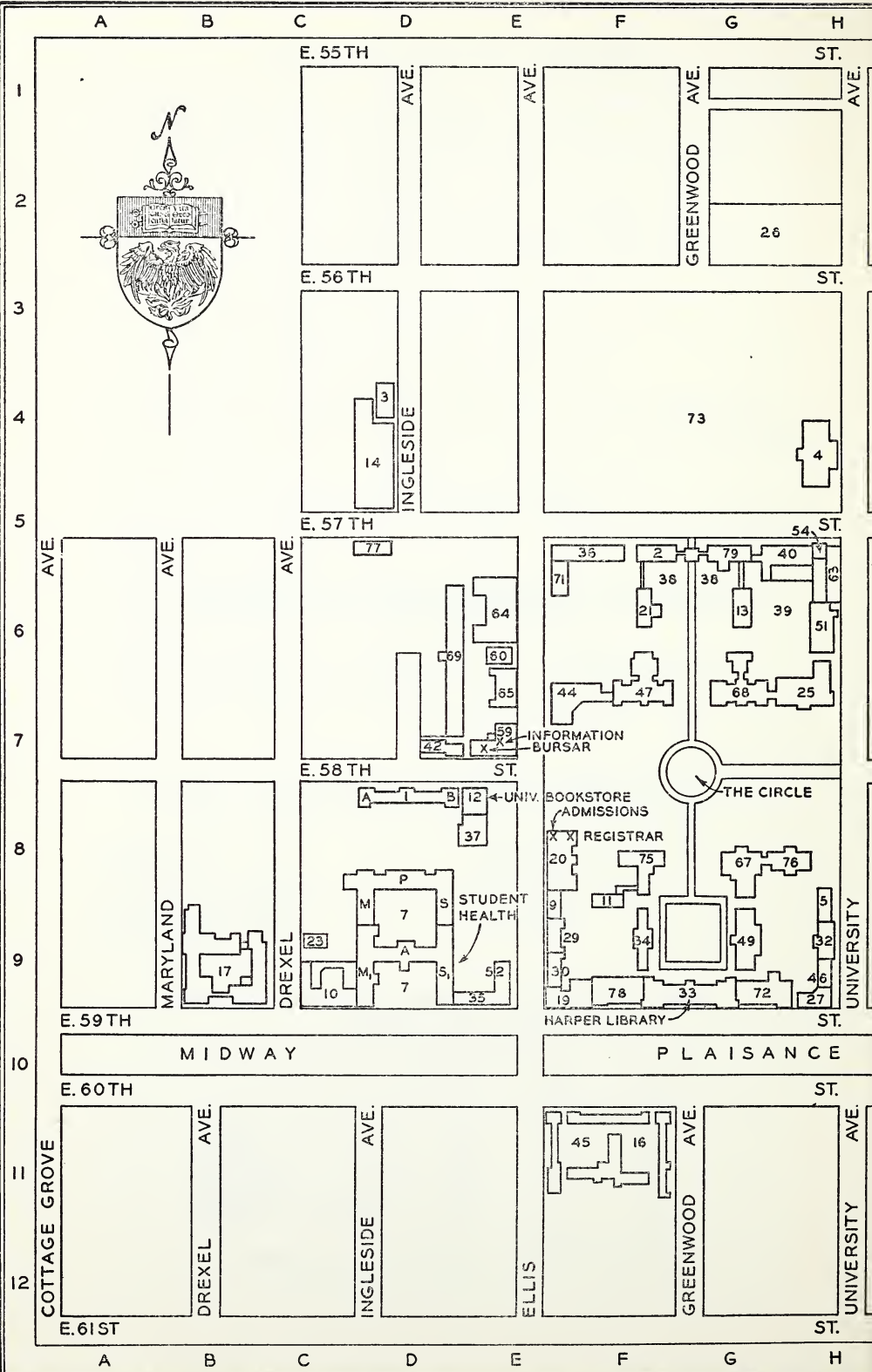
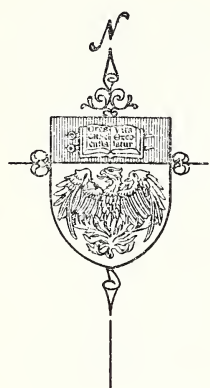
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 Irving Wills

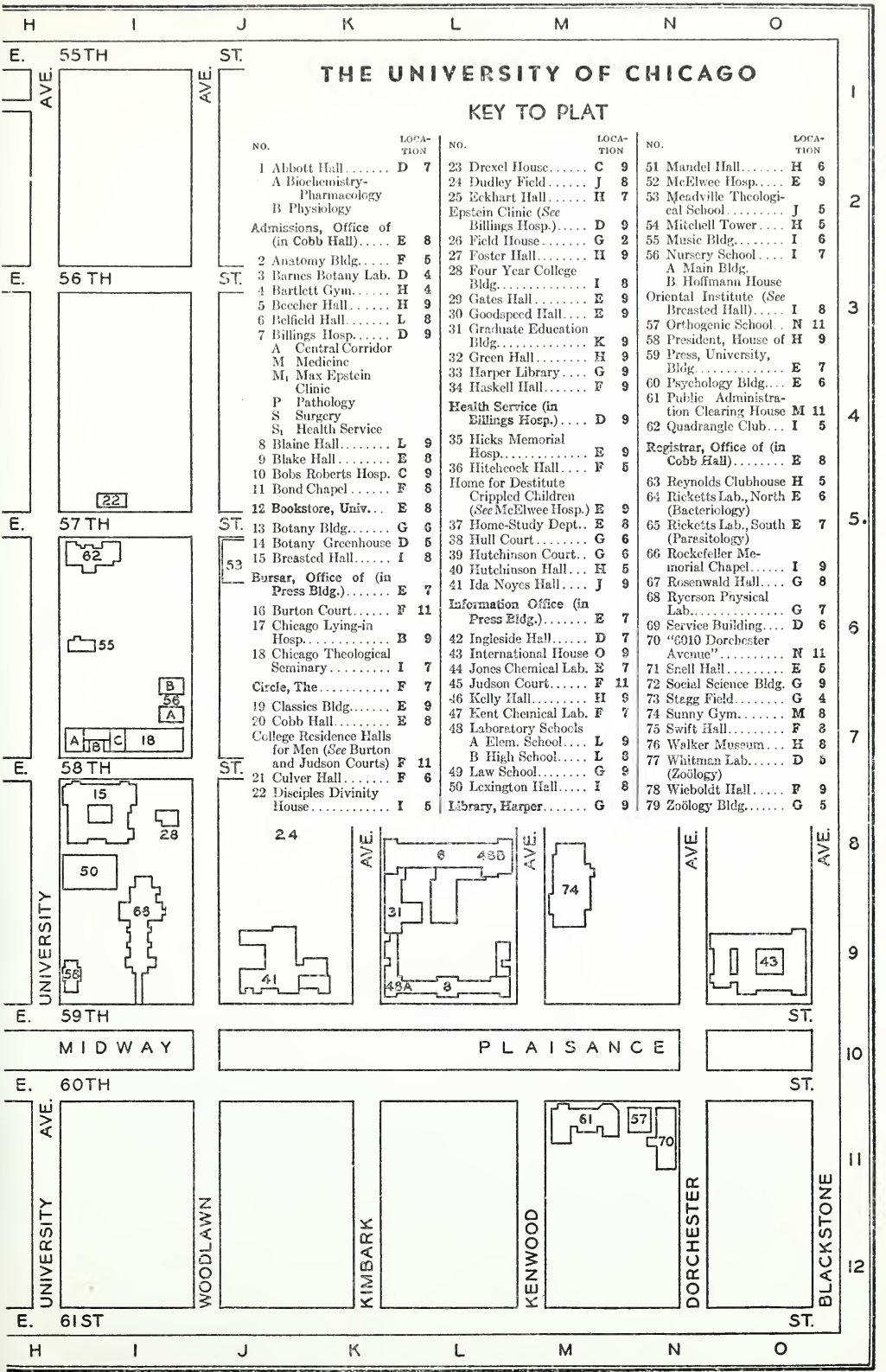
### SUMMARY OF ATTENDANCE IN THE MEDICAL SCHOOL FOR THE YEAR 1942-43

	Men	Women	Total
Seniors.....	69	1	70
Juniors.....	51	2	53
Sophomores.....	59	2	61
Freshmen.....	62	5	67
Spring 1943 Freshmen...	63	2	65
Special.....	8	1	9
Grand total.....	312	13	325



**PLAT OF THE UNIVERSITY OF CHICAGO**





THE UNIVERSITY OF CHICAGO

KEY TO PLAT

NO.	LOCAT- TION	NO.	LOCAT- TION	NO.	LOCAT- TION
1	Abbott Hall..... D 7	23	Drexel House..... C 9	51	Mandel Hall..... H 6
A	Biochemistry..... F 5	24	Dudley Field..... J 8	52	McElwee Hosp..... E 9
B	Physiology..... H 4	25	Eckhart Hall..... H 7	53	Mendville Theologi- cal School..... J 5
Admissions, Office of (in Cobb Hall)..... E 8		Epstein Clinic (See Billings Hosp.)..... D 9		54	Mitchell Tower..... H 5
2	Anatomy Bldg..... F 5	26	Field House..... G 2	55	Music Bldg..... I 6
3	Barnes Botany Lab. D 4	27	Foster Hall..... H 9	56	Nursery School..... I 7
4	Bartlett Gym..... H 4	28	Four Year College Bldg..... I 8		A Main Bldg. B Hoffmann House
5	Beccher Hall..... H 9	29	Gates Hall..... E 9		Oriental Institute (See Breasted Hall)..... I 8
6	Belfield Hall..... L 8	30	Goodspeed Hall..... E 9	57	Orthogenic School..... N 11
7	Billings Hosp..... D 9	31	Graduate Education Bldg..... K 9	58	President, House of H 9
A	Central Corridor	32	Green Hall..... H 9	59	Press, University, Bldg..... E 7
M	Medicine..... G 9	33	Harper Library..... G 9	60	Psychology Bldg..... E 6
M	Max Epstein Clinic..... F 9	34	Haskell Hall..... F 9	61	Public Administra- tion Clearing House M 11
P	Pathology..... D 9		Health Service (in Billings Hosp.)..... D 9	62	Quadrangle Club..... I 5
S	Surgery..... E 9	35	Hicks Memorial Hosp..... E 9		Registrar, Office of (in Cobb Hall)..... E 8
S	Health Service..... E 8	36	Hitecock Hall..... F 5	63	Reynolds Clubhouse H 5
8	Blaine Hall..... L 9		Home for Destitute Crippled Children (See McElwee Hosp.) E 9	64	Ricketts Lab., North E 6
9	Blake Hall..... E 8	37	Home-Study Dept..... E 8	65	Ricketts Lab., South E 7
10	Bots Roberts Hosp. C 9	38	Hull Court..... G 6		(Parasitology)
11	Bond Chapel..... F 8	39	Hutchinson Court..... G 6	66	Rockefeller Memo- rial Chapel..... I 9
12	Bookstore, Univ..... E 8	40	Hutchinson Hall..... H 5	67	Rosenwald Hall..... G 8
13	Botany Bldg..... G 6	41	Ida Noyes Hall..... J 9		Ryerson Physical Lab..... G 7
14	Botany Greenhouse D 5		Information Office (in Press Bldg.)..... E 7	69	Service Building..... D 6
15	Breasted Hall..... I 8	42	Ingleside Hall..... D 7	70	"6010 Dorchester Avenue"..... N 11
Bursar, Office of (in Press Bldg.)..... E 7		43	International House O 9	71	Snell Hall..... E 5
16	Burton Court..... F 11	44	Jones Chemical Lab. E 7	72	Social Science Bldg. G 9
17	Chicago Lying-in Hosp..... B 9	45	Judson Court..... F 11	73	Stegg Field..... M 4
18	Chicago Theological Seminary..... I 7	46	Kelly Hall..... H 9	74	Sunny Gym..... M 8
Circle, The..... F 7		47	Kent Chemical Lab. F 7	75	Swift Hall..... F 8
19	Classics Bldg..... E 9	48	Laboratory Schools A Elem. School..... L 9	76	Walker Museum..... H 8
20	Cobb Hall..... E 8		B High School..... L 9	77	Whitman Lab..... D 5
College Residence Halls for Men (See Burton and Judson Courts) F 11		49	Law School..... G 8		(Zoology)
21	Culver Hall..... F 6	50	Lexington Hall..... I 8	78	Wieboldt Hall..... F 9
22	Disciples Divinity House..... I 5		Library, Harper..... G 9	79	Zoology Bldg..... G 5





The following *Announcements* of the University of Chicago are available for distribution and will be sent upon application made to the Entrance Counselor, The University of Chicago, Cobb Lecture Hall, Room 105:

The College and the Divisions

The School of Business

The Department of Education

The Divinity School

The Graduate Library School

The Law School

The School of Medicine

The School of Social Service Administration

The Summer Quarter

Home-Study Department

University College

Nursing Education

The Preparation of Teachers

Study in Human Development

Department of Home Economics and Household Administration

Study in Guidance and Personnel Work

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## GOING TO COLLEGE IN WARTIME

A new illustrated booklet, *The College of The University of Chicago*, is now available to those who request it. The booklet describes the University's four-year collegiate program, which students may enter *after two years of high school*.

The Chicago collegiate program was developed in peacetime but has proved to be uniquely adapted to the war situation. The curriculum is devoted to the liberal arts. Most students who enter the College following the sophomore year of high school can, with diligence and by eliminating vacations, achieve the A.B. or the Ph.B. degree by the age of eighteen. Entering classes will be admitted in June, September, and February.

The booklet may be obtained by writing to Dean William E. Scott, Entrance Counselor, The University of Chicago.

